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ART. I.—*A Monograph on the Nature and Treatment of Artificial Anus.* By SAMUEL D. GROSS, M.D., Professor of Surgery in the Louisville Medical Institute.

In the January, February, and March numbers of this Journal, I published an elaborate paper on the Nature and Treatment of Wounds of the Intestines. To that paper the present essay is designed as a supplement. It is believed that this is the first attempt in this country, if not in the English language, to exhibit the subject of Artificial Anus in a connected and methodical point of view, and if it shall have the effect of attracting the attention of the profession I shall consider myself amply compensated for the time and labor it has cost me.

It must be obvious that the term "artificial," applied to this affection, and in vogue among American and British authors, is rather ill chosen. In its etymological sense it merely implies some production of art, as an artificial leg, or an artificial

eye; while in surgical language it denotes the effect of some operative or mechanical procedure, as the formation of an artificial pupil. By most of the French writers it has been superseded, in reference to the present topic, by the word "preternatural", and this is unquestionably preferable, in all respects, as it is much more expressive of the true nature of the malady which it is intended to designate. Equally appropriate is the term "accidental," used by some of the continental surgèons. The word artificial, in fact, should be restricted to that form of the affection, in which the abnormal outlet is established mechanically, for the purpose of affording relief when there is some insurmountable obstacle in the rectum, or lower bowel. In employing the term "artificial," therefore, in connexion with the present subject, I am governed rather by the established usage of the profession than by the rules of sound criticism.

Artificial, accidental, or preternatural anus may occur in any part of the abdomen; but, as it is generally produced by gangrene of the bowel, from the pressure which is exerted upon it by hernial stricture, it is by far most frequently met with in the inguinal, scrotal, femoral, and umbilical regions, particularly the first two. For the same reason we find that the small intestine is much oftener involved than the large, which is fixed or attached, while the former is loose, floating, and consequently more liable to protrusion. Occasionally, though rarely, the abnormal anus has its seat in the lumbar region, high up in the iliac, the hypochondriac, or even the epigastric.

Three causes mainly give rise to this affection, namely, strangulated hernia, accompanied with mortification of the bowel, penetrating wounds, and stercoraceous abscess; the frequency of their occurrence being in the order in which they are here enumerated. A blow or kick on the abdomen may so contuse, bruise, or injure the bowel as to lead to the establishment of an artificial anus. Jobert saw a case in which an opening was formed in this way between the ileum

and the vagina,* and examples of a similar kind have been witnessed by others.

When the bowel is extensively divided by a sharp instrument, and the wound is managed improperly, or left to itself, the patient either perishes from peritoneal inflammation caused by fæcal effusion; or adhesions take place between the gut and the adjacent parts, and the contents of the tube issue at the external orifice. The latter always happens when this accident is treated in conformity with the method of Palfin, Bell, and Scarpa, who advise the inner wound to be kept in apposition with the outer, by a ligature passed through the mesentery.

Stercoraceous abscesses are induced by various causes: sometimes by ulcerative action, often by external violence, and occasionally by the irritation created by the presence of a foreign body, as a needle or pin, a fish or chicken bone, or a piece of coin. In either case, as soon as the matter is discharged, whether spontaneously or by the efforts of the surgeon, the fæces escape at the abnormal aperture, either wholly or in part, and the patient is affected, not merely as some have pretended, with an intestinal fistula, but with a genuine preternatural anus. Large fæcal accumulations have sometimes been mistaken for this kind of abscess; the knife or lancet has been plunged into them, and the disease in question has been the consequence, or the individual has died from peritoneal inflammation. Artificial anus is occasionally congenital, in which case it is usually seated at the umbilicus.

Mortification, like penetrating wounds, may affect the entire circumference of the bowel, or only a part of it. The extent of the lesion will exert a material influence upon the restorative process, and in this respect the disease might not inappropriately be divided into partial and complete.

The external orifice of an artificial anus exhibits no uniformity in respect to its size and configuration. In many

* Maladies du Canal Intestinal, T. ii, p. 95.

cases it is rounded, in some ovoidal, and in most irregular. In its diameter it varies from a few lines to an inch and a half or even two inches; being usually smaller in traumatic cases, or in such as result from penetrating wounds, than in those which are produced by ulceration, abscess, and especially by gangrene. The margins of the opening are thick, bevelled, depressed, or inclined towards the centre, where they are in close contact with the mucous membrane of the two ends of the bowel, the junction between them being indicated by a reddish line; they have a raw, flesh-colored appearance, and are covered with numerous granulations, which are often very painful, and so irritable as to bleed upon the slightest touch. The matter which they secrete, and which is seldom very abundant, does not differ from that of other sores under similar circumstances. In cases of long standing, or where the fæcal discharges are unusually acrid, the edges are very much indurated, inflamed, highly sensitive, and studded with fungous vegetations, some of them the size of a split-pea, or even half a dime. In a third series of cases, perhaps, they are elevated, hard, and almost insensible. The skin in the immediate vicinity of the opening, as well as for some distance beyond it, is red, inflamed, chapped, fissured, excoriated, or ulcerated, and so tender frequently that the patient cannot bear to have it touched, wiped, or washed, however gently this may be done.

The depth of the outer orifice, or the distance between the skin and the bottom of the intestinal aperture, varies from three to twelve lines. It is always less when the disease is produced by a wound than when it is caused by gangrene; much will also depend upon the natural thickness of the wall of the abdomen, and the degree of plumpness or emaciation of the individual. Lallemand met with an instance where the distance between the two points was nearly two inches, and in another, which fell under the observation of Delpech, it was upwards of three inches.*

* Dict. de Medicine, T. iii, p. 347.

The external orifice is occasionally multiple, that is, instead of a single opening there are several. In this case there are usually fistulous tracks, which communicate with the main outlet, and sometimes even with each other. Velpeau mentions an instance in which there were not less than five or six distinct apertures, and another, not less remarkable, is related by Dupuytren.* This perforated and cribriform state of the parts is generally produced by some of the stercoraceous matter insinuating itself among the muscular fibres and cellular substance of the abdomen before the margins of the external orifice are sufficiently protected by the new adhesions. An abscess soon forms, preceded by an erysipelatous blush of the skin, and followed by a discharge of purulent matter, almost insupportably fœtid in its character.

The union between the two ends of the bowel and the circumference of the outer orifice is effected through the medium of plastic matter, and constitutes an indispensable element of the disease. The inflammation, preceding and accompanying the effusion, always begins in the serous surfaces of the parts, from which it gradually extends to the other structures, as the mucous membrane, the muscles, cellular substance, and the skin. The plastic matter, soft and glutinous at first, is soon organized, and thus opposes an effectual barrier to the effusion of fæcal matter into the abdominal cavity. Subsequently it undergoes all the changes that lymph experiences, under favorable circumstances, in other situations. The extent of this adhesion varies, in different cases, from half a line to a line; it rarely amounts to half an inch, or, indeed, even the fourth of an inch, and in proportion as it is firm or otherwise will it be able effectually to resist the influence of such causes as have a tendency to separate the gut from the wall of the abdomen. Dupuytren met with two cases in which the union was so feeble that the intestine lost its hold, and the patients died from fæcal effusion.

When the artificial anus supervenes upon strangulated her-

* Dict. de Medicine, T. iii, p. 346.

nia, the formation of these adhesions usually precedes the death of the bowel; in the traumatic variety of the affection, on the contrary, they are established after the reception of the injury, and hence the greater frequency of fatal effusion in the latter than in the former. As the adhesions extend only a small distance along the gut, a cul-de-sac is formed, the opening of which looks towards the belly, and into which the abdominal viscera may protrude, so as to complicate the disease.

Immediately around the inner margins of the outer orifice are, as was previously stated, the two ends of the bowel; lying generally side by side, like the tubes of a double-barrelled gun. Each opens by a distinct orifice, of which the upper, in time, becomes much the larger; they are bounded by a sort of villous rim, are irregularly rounded in their form, and are separated from each other by a septum or partition. The upper orifice gives passage to the fæces, and, as it is unprovided with a sphincter muscle, the patient has no control whatever over their escape. Even mechanical means will not always obviate this inconvenience, and the utmost attention to cleanliness does not defend the surrounding parts from the effects of the acrid discharges. The lower orifice, of the same size at first as the upper, is generally very narrow, puckered up, and sometimes even difficult to be found, especially when it has ceased for a long while to receive fæcal matter. The upper opening is temporarily closed when the corresponding extremity of the bowel is touched with a probe or finger, or exposed to a few drops of cold water. When thus irritated it presents very much the appearance of the anus of the horse, the mucous lining being everted and corrugated by the peristaltic action of the muscular fibres.

The two ends of the bowel, at first similar in size, by degrees undergo important changes. The upper continually giving vent to fæculent matter, bile, mucus, and even ingesta, receives a preternatural quantity of blood, and hence generally acquires a considerable increase of volume and strength; its coats are thicker than in the normal state, the muciparous

follicles are larger, the lining membrane is of a deeper red, and the peristaltic action is inordinately energetic. The lower extremity, on the contrary, having no longer any active function to perform, falls into a state of atrophy. Its tunics are pale, flaccid, and attenuated, its caliber is considerably diminished, though not obliterated, and its mucous glands are wasted and almost imperceptible. The canal contains a soft, whitish, gelatinous looking substance, which is evidently the product of an imperfect secretion, and which is voided by stool at intervals of two, three, or four months. The intestine, notwithstanding these alterations, still preserves its tubular form, however long the fæces may have been discharged through the abnormal aperture. That this is the fact has been proved by repeated dissections. Thus, Lecat examined the body of a female who had labored under this malady for twelve years, and in whom the inferior portion of the gut, or the part comprised between the natural and artificial outlet, was still pervious, though much contracted. Similar observations have been made by Desault and Dupuytren. The latter opened a patient, two years after the establishment of an artificial anus, and found that the tube not only remained open, but that it had experienced comparatively little diminution. The following case, however, observed by Mons. Begin, of Paris,* shows that the obliteration of the intestine, although extremely rare, is not impossible. The patient was eighty years of age when he died, and for more than half this period he had labored under an artificial anus, seated in the left groin, and communicating with the arch of the colon. The superior extremity of the bowel only opened at the external orifice, and gave passage to the fæcal matter. No aperture, corresponding with the other end, could be discovered either in the cicatrice or in the surrounding parts. The gut itself was converted into a hard, solid, whitish cord, not thicker than a common quill, which

* Dict. de Med. Chir. Pratiques, T iii, p. 133.

passed to the left kidney, from which it descended, after several turns, to the anus, increasing somewhat in size as it approached its termination. The inferior part was still pervious, and contained a little whitish mucus; the upper for the length of six or eight inches, next to the abnormal aperture, was completely obliterated; and the intermediate portion was so contracted as scarcely to admit a small probe.

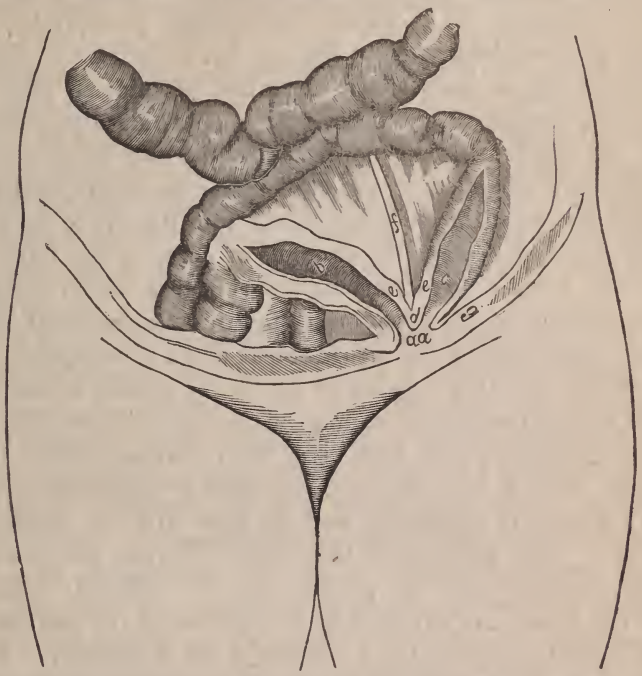
This atrophy or wasting is not confined to the lower portion of the bowel, but often affects the corresponding part of the mesentery and even the lymphatic ganglions. As might be supposed, it is always more marked in old than in recent cases.

In artificial anus, caused by a gangrened rupture, the two ends of the bowel are surrounded and closely embraced by a sort of membranous pouch, to which Scarpa, who first described it, has applied the name of *infundibulum* or *funnel.** It is formed by the prolongation of the peritoneum which constituted the neck of the hernial sac, and varies very much in its shape, dimensions, and direction, its base being at the bowel, and the apex at the skin. It is generally very firm and dense in its structure, and from one to two lines in thickness, according to the extent of the previous inflammation; externally it is intimately united to the margins of the abnormal opening, and internally it presents a smooth villous surface, not unlike that of an old fistulous track. The fæculent matter from the upper orifice is poured into this cavity, and thence, when the artificial anus is closed, it is carried, after describing a half-circle, into the lower end of the canal. This membranous pouch is always wanting when the disease is the effect of a penetrating wound, and occasionally even when it is the consequence of a gangrened hernia: in both cases the gut adheres immediately to the edges of the opening in the muscles and integuments. The most interesting circumstance connected with this funnel-shaped cavity is the influence which it exerts upon the reparative process, or spon-

* Treatise on Hernia, Memoir Fourth, p. 288.

taneous cure, which is always so much the more prompt and perfect in proportion as it is larger and longer.

Interposed between the two extremities of the intestine, and formed by the juxta-position of their sides, is the *ridge, septum,* or *partition,* which Scarpa has described under the



name of the promontory, and Dupuytren under that of the epéron, spur, or buttress. It consists of two angular or crescentic folds composed each of four lamellæ, of which the inner two are of a serous nature, and firmly united together by plastic matter, for an extent varying from one to six, eight, or even twelve lines. The outer layers are of a mucous character, and are continuous with the lining membrane of the

* *a a*, Opening of the artificial anus, and point of union between the skin and the mucous membrane; *b*, upper end of the intestine; *c*, lower end of the intestine; *d*, the septum, epéron, or ridge, formed by the walls of the two contiguous cylinders; *e e*, parietes of the bowel; *f*, the ligament or cord formed by the mesentery; *g*, the cul-de-sac between the peritoneum of the intestines and of the abdominal walls, into which herniæ occasionally protrude.

tube, of which they form a part. Dividing the bottom of the funnel, where it is situated, into two unequal parts, this septum juts out nearer to the surface of the abnormal opening in proportion as the loss of intestinal substance has been more considerable, and the change in the direction of the tube more marked. It is small, and scarcely perceptible, when the gut has been merely pierced by a wound, or slightly affected by an eschar, but large and prominent, when the lesion, whatever it may be, involves the whole circumference of the canal.* In the former case, the two orifices of the bowel are separated by a kind of gutter or groove, which directs the transit of the fæcal matter from the one to the other, and greatly facilitates the attempts at cure; in the latter, the septum forms a projecting angle or buttress, which conducts the contents of the upper orifice towards the abnormal outlet, and which nothing but art can break down or surmount.

When the two lamellæ of which this septum is composed are viewed posteriorly, or from within the belly, we find that they gradually recede from each other, leaving thus a triangular interval between them, the apex of which corresponds to the point of separation, and the base with the abdominal cavity. The surfaces of these lateral layers, which are, in fact, nothing but the parietes of the affected cylinders of the bowel, are invested by a reflection of the peritoneum, and afford attachment to a process of the mesentery. From the manner in which this membrane is stretched between the spinal column and the concave side of the intestinal convolutions, it follows that it is always more or less dragged on when the gut is protruded from the belly, forming a sort of cord by which the body is inclined forwards, and the tube drawn inwards. A constant traction is thus kept up, which varies in degree in different cases, and which has occasionally been sufficient to destroy the adhesions between the bowel and the wall of the abdomen, causing fatal effusion into the cavity of the peritoneum.† Dupuytren, who has devoted

* Dupuytren, Dict. de Med. and Chir. Pratiques, T. iii, p. 130.

† Dupuytren, Leçons Orales, T. ii, p. 207.—London Medico-Chir. Review, vol. ix, p. 315.

much attention to this subject, states that this tension of the mesentery is continued long after the malady is removed. Several individuals who had been cured of artificial anus, were subsequently re-admitted into the Hotel-Dieu, where they died of other diseases. On dissection it was ascertained, contrary to what might have been expected, that the bowel, instead of being adherent to the walls of the abdomen, was free and unattached; a solid fibrous cord, however, being still stretched between them. This last was only a few inches in length by several lines in thickness, greatly attenuated at the middle, invested by peritoneum, and formed entirely of condensed cellular substance. Had these individuals lived a little longer this band would, doubtless, have been gradually destroyed, and every vestige of the malady ultimately disappeared.

The matter which issues at the abnormal opening varies in its properties according to the length of time it is retained in the bowel, the nature of the food, and the state of the patient's health. Generally speaking it is soft, semi-fluid, or even quite liquid, of a greenish color, and composed of an admixture of fæces, bile, and intestinal secretion, together with ingesta. Its consistence is always less when the artificial anus involves the jejunum or the superior extremity of the ileum than when it affects the lower portion of the small bowel, the cœcum, or the colon. In the former case, too, it has less stercoraceous odor, and occasionally contains a considerable quantity of pancreatic juice. The frequency with which it is voided is materially influenced by the nature and quality of the food, as well as by the manner in which it is prepared, and by the distance which intervenes between the abnormal aperture and the stomach. When the artificial anus is situated near this organ, it commonly passes off within an hour or two after eating, whereas, if it be lower down it may not be voided for five or six hours, or perhaps not oftener than three or four times a day. The evacuations, as was before intimated, are always involuntary, and are generally effected with considerable rapidity, being accompanied

with a peristaltic movement of the upper extremity of the gut, and a sort of rumbling noise, especially when there is an escape of air.

The quantity of fæcal matter flowing along the abnormal opening, like its quality and the frequency of its discharge, must necessarily be influenced by a variety of circumstances. Of these the most important are the amount of food, the extent of the intestinal lesion, and the size of the septum between the two ends of the bowel. Most persons laboring under this disease eat voraciously, often, indeed, three or four times as much as they did before; they are always hungry, have an enormous appetite, and are never satisfied. This is particularly the case when the ingesta are retained only for a short time. Hence there is a proportionably large accumulation of fæculent matter, and as this cannot pass from one intestinal orifice into the other, in consequence of the mechanical obstacle interposed between them, most of it, if not all, escapes at the abdominal opening.

The pernicious influence which the brief sojourn of the alimentary matter exerts upon the system is not always so great as might be supposed. Indeed, not a few instances are related in which the patients not only retained their health and strength, but even grew fat. In the generality of cases, however, the effects are quite the reverse. The food is retained too short a period to be properly acted upon by the digestive organs; the function of chylification is impaired; nutrition is carried on imperfectly; the body is emaciated, and there is a proportionable failure of the physical powers. In extreme cases, that is, where the general health is otherwise affected, or where the passage of the aliment is exceedingly rapid, the patient has sometimes perished from inanition.

Another very serious inconvenience to which persons laboring under artificial anus are subject is the protrusion of the extremities of the gut. This often amounts to a real prolapsus, and is liable to occur, no matter what may have been the cause of the disease. It may affect one or both

ends, but the upper is more frequently involved than the lower, though the reverse is said to be the case by Boyer, not, however, with any foundation in truth. The extent of the prolapsus varies, in different cases, from three to eight inches; more rarely it amounts to a foot, or even a foot and a half. In its diameter the tumor seldom exceeds two and a half or three inches. It is more or less conical in its shape, contracted at the base, and perforated at the extremity by an irregularly rounded opening. The everted mucous membrane is at first only preternaturally red and vascular; by degrees, however, it becomes thickened, rugose, indurated, and completely hypertrophied. In this respect it experiences the same changes of structure as the villous coat of the rectum in prolapsus of the anus. The swelling, which is commonly much larger in the erect than in the recumbent posture, frequently possesses so little sensibility that it may be touched or handled without pain. At times, however, it is excessively tender, and may then become a source of real suffering, depending more, perhaps, upon the state of the system than upon that of the part immediately concerned. Strangulation of the prolapsed intestine occasionally occurs, and, although the stricture by which it is produced, may generally be easily relieved by an operation, yet in several instances it has terminated fatally. Sabatier, in his Memoir on Artificial Anus, quotes two examples from Puy, a surgeon of Lyons, where death was caused in this way; an instance of a similar kind fell under the observation of Flajani, and another is mentioned by Le Blanc, in the second volume of his "Operations de Chirurgie." In a case narrated by Mons. Veiel,* the division of the stricture did not prevent death.

From this rapid sketch of the nature, anatomy, symptoms, and complications of artificial anus, it is obvious that, in whatever light it be viewed, it must be regarded as one of the most distressing affections to which we are liable. Independently of its filthy and disgusting character, the patient has

* Archives Generales de Medicine, 2d series, T. vii, p. 542.

scarcely a moment of comfort of any kind; the skin of the abdomen is constantly fretted and chafed, in spite of the utmost attention to cleanliness, the general health is often seriously deranged, the digestive organs are apt to become impaired, the bowels are frequently racked with colicky pains, the mind is gloomy and despondent, and life itself is a burden. Death is occasionally produced by inanition, or by the laceration of the new adhesions and the consequent effusion of fæcal matter into the peritoneal cavity; but these occurrences are rare, and more generally the patient lives in the manner mentioned, and is ultimately carried off by some other disease. The probability of spontaneous reparation, or a cure by surgical interference, will depend very much upon the seat of the complaint, the nature of the exciting cause, the freedom from complications, and the extent of the septum or partition between the two ends of the gut. It need hardly be stated that the age of the patient and the state of his health exercise considerable influence on the prognosis.

Treatment.

The treatment of artificial anus naturally divides itself into palliative and radical. The first consists in promoting the comfort of the patient, by strict attention to cleanliness, preventing too early an escape of the ingesta, and combating such accidents or complications as may arise during the progress of the malady. The radical treatment has for its object the re-establishment of the natural course of the fæces, and the obliteration of the opening in the wall of the abdomen. These topics involve important principles, and therefore require separate consideration.

It is a question which has not yet been definitively settled how soon, after the occurrence of an artificial anus, we are warranted in attempting a radical cure. Several examples are now on record where, by premature interference of this kind, the patients lost their lives. Death, under these circumstances, may be produced by a variety of causes, but the

most common is, perhaps, the want of adhesion in the sides of the opening which is made in the epéron or intervening septum, and the consequent escape of fæcal matter into the abdominal cavity. Another source of mischief is the imperfect union between the ends of the bowel and the margins of the abnormal outlet. Indeed, it appears to me that, until this union is fully established, or is so strong and firm as to render it impossible for it to give way under the traction of the enterotôme or the manipulations which are necessary to introduce the seton, it would be highly improper, with a view to a radical cure, to do any thing calculated to jeopard the result by fæcal effusion into the peritoneal cavity. We have no means, unfortunately, of ascertaining how soon the plastic matter, by which the union in question is effected, becomes organized, and capable of withstanding such forces as have a tendency to break up the new connexions. Nevertheless, there is reason to believe, from what we know in regard to the changes which coagulating lymph experiences in other parts of the body, that several months, probably from three to six, are necessary for the purpose. Prior to this period, therefore, I would deem any surgical interference officious und unadvisable, particularly in relation to the enterotôme of Dupuytren, or the modification of this instrument by other practitioners. The method of Desault, of which we shall presently speak, may be advantageously resorted to much earlier, and consequently before the adhesions between the contiguous parts have acquired all the strength of which they are capable.

There is, therefore, a period, unless a spontaneous cure should in the meantime supervene, of several months during which the patient must bear with his loathsome infirmity, and suffer all the inconveniences arising from the effusion of fæculent and other matters. This, however, is not all. The case may be such, as, by its very nature, to preclude the possibility of effecting a radical cure by any means of which we are in possession; or the patient may, from timidity or other causes, be unwilling to submit to an operation of any

kind. In either event, it is the duty of his attendant to make his situation as comfortable as practicable.

The first and most important object to be attended to, in a case such as we have imagined, is to prevent the escape of fæcal matter at the artificial anus; or, if this cannot be done, to apply some apparatus for receiving and retaining it. When the disease has been caused by a wound, or when the bowel has been only partially destroyed by gangrene, the former of these indications is generally easily fulfilled by means of a piece of gum-elastic, several lines thick, shaped like a nipple-shield, and large enough not only to cover the external orifice, but to extend some distance beyond it. This, being soft and flexible, readily accommodates itself to the various movements of the body, and answers the purpose much better than leather, tin, brass, or sheet-lead, recommended by some surgeons. It should be retained by a graduated compress and bandage; or, what would be better, a common truss with a broad pad perforated in the centre for receiving the knob on the gum-elastic plate. To derive full benefit from this apparatus it might be so constructed as to have a projection on its posterior surface, carefully fitted into the abnormal opening, which it would thus more effectually close, at the same time that it would prevent the protrusion of the bowel, so liable to occur when the parts are imperfectly supported, or when the patient is in the erect position.

When the fæces can not to be made to pass along the natural channel, in consequence of the inordinate size of the septum between the two ends of the bowel, the patient may generally be rendered very comfortable by wearing an apparatus for their reception and temporary retention. The older surgeons were in the habit of using, for this purpose, receptacles of leather, or horn, which were fastened round the body by bandages of particular construction. These contrivances, however, rarely fulfilled the intention for which they were constructed, as it was found not only difficult to adapt them accurately to the parts, but from the facility with which

they imbibed moisture they soon became offensive, and required to be often renewed. The most perfect apparatus of this kind, perhaps, was constructed many years ago, by Juville, a celebrated Parisian truss-maker. It is delineated in his "Traité des Bandages Herniaires," and has occasionally been worn with great benefit. In its construction it is exceedingly complicated, and it is scarcely possible to convey a correct idea of it without a plate. It is composed of a common inguinal truss, the pad of which is made of ivory, and rests upon the margins of the artificial opening. To a hole in the centre of the pad is fitted a tube of gum-elastic, which is furnished with a valve, and directs the fæcal matter to a silver receiver, fastened to the inner part of the thigh. The silver receptacle is of a flattened conical shape; it is three inches in length by two inches and a half in breadth, and may be unscrewed and emptied without disturbing the rest of the instrument. The valve in the tube opens by its own weight when the patient is in the erect position, but shuts when he lies down, and prevents the accumulated fæcal matter from reflowing into the artificial anus. When the apparatus is properly adjusted it is said to answer so well that the patient is able to pursue his ordinary occupation, and to escape the inconveniences arising from the discharge of fæculent and other matter.

If, notwithstanding the use of an apparatus of this kind, the fæces are diffused over the surrounding surface, the utmost attention must be paid to cleanliness. Without this no comfort can be expected. If allowed to remain in contact with the skin, even for a short time, the acrid discharges not only induce pain and irritation, but they render the patient loathsome to himself, and disgusting to his friends. In fact, there is no situation in which a human being can be placed which is more pitiable and distressing, or better calculated to excite our sympathy.

When inflammation arises, either in the part itself, or in the neighboring integuments, it is to be combated by frequent ablutions, emollient poultices, and anodyne fomentations. If

it partakes, as it sometimes does, of an erysipelatous character, it may be necessary, in addition to these means, to use leeches and blisters. The callosities which are so apt to form on the surface of the sore should be removed with the knife or scissors; escharotics are to be avoided, as they always give rise to severe pain, and rarely afford much relief. When the skin is ulcerated, fissured, chapped, excoriated, or studded with pustules, it should be thoroughly cleansed with a soft sponge and tepid water, after which it must be anointed with simple cerate, and covered with a slippery-elm or linseed poultice, These dressings are to be continued as long as may be necessary, and renewed twice or three times in the twenty-four hours.

Fistulous tracks, when they exist, must be incised, and their edges pared, to put them in a condition favorable to cicatrization. The cure is sometimes much retarded, if not entirely prevented, by the perforated state of the parts; the skin, perhaps, is indurated and disorganized, and fæcal matter issues at various points, keeping up constant irritation and distress. In such a case it may become necessary to remove the affected structures, bowel and all, with the knife, to reduce them to the nature of a simple wound.

Inanition is seldom to be apprehended when the artificial anus is seated in the large intestine, or low down in the small. In either event, abundant time is usually afforded to the chyliferous vessels for taking up the nutritious portion of the ingesta, and conveying it to the proper receptacles, before the contents of the tube reach the abnormal outlet. When this, however, is situated higher up, the case may present a very different aspect, as the chymous matter may escape too soon to enable the system to be much benefited by it. This circumstance is always known by the soft and lactescent nature of the discharge, by the voracious appetite, and by the progressive emaciation. The patient eats three or four times the accustomed quantity of food, his hunger is never appeased, he is thin and haggard, and has but little strength. To support life, which is occasionally much endan-

gered by this occurrence, the individual must be kept perfectly quiet, the diet must be light, nutritious, and easy of digestion, the irritability of the bowels must be allayed by anodynes, and the outer opening must be well protected with an obturator. In bad and intractable cases, threatening life, advantage might be derived from the use of nutritious injections.

When the bowel becomes prolapsed, as it is apt to do when the opening is not properly closed, the reduction is usually effected with great facility, by placing the patient on his back, and making gentle and well-directed pressure upon the part with the fingers of one hand, while the bowel is held between the thumb and fingers of the other. In more obstinate cases, the replacement may be attempted by systematic compression, while the patient is lying on his back; this will have the effect of emptying the protruded gut of its blood, and will often succeed after other and more simple means have failed. When the reduction is impracticable, the gut should be supported by a well adjusted apparatus, and the patient should refrain from laborious exertion, from laughing and coughing, irregularities of diet, and from every thing tending to increase the swelling. When symptoms of strangulation arise, the most rigorous antiphlogistic measures are to be adopted; blood is to be abstracted, both generally and locally, the patient is to be placed in the warm bath, and cloths, wrung out of tepid water, are to be constantly applied to the affected part. In a word, the case is to be treated precisely as when the strangulation is produced by ordinary causes. When these remedies fail, relief must be attempted by an operation. The patient lying upon his back, near the edge of the bed, the surgeon takes a bistoury which he passes along the fore-finger of the left hand, and makes a free incision through the integuments around the base of the tumor, which is generally sufficient to remove the stricture. Should this, however, be found not to be the case, it will be necessary to extend the incision into the end of the bowel, at its union with the margin of the abdominal orifice. Soon after

the stricture is divided, the tension of the part subsides, the fæces flow out externally, the pain disappears, and the gut gradually becomes reducible.

Artificial anus is susceptible of spontaneous cure. Of this numerous examples are on record, and there is scarcely a surgeon, at all extensively engaged in practice, who has not met with cases of it. The fæces, after having passed for weeks or months through the orifice in the abdomen, gradually resume their natural channel, the artificial anus closes up, and at length all that remains is a small cicatrice, indicating the situation of the former injury.

A singular instance of artificial anus, in which a cure was effected during pregnancy, has been related by Dr. Wedemeyer of Hanover.* The woman was thirty-two years of age, and the disease, caused by a gangrened hernia, had existed for seven months, during which it had resisted various methods of treatment. As pregnancy advanced, and the uterus ascended into the abdomen, the fæcal discharge diminished, and passed proportionably along the natural route. Towards the close of gestation, nothing issued at the abnormal opening, except a little pus and serum, and in two months after her accouchement the parts had completely healed.

Before we attempt the radical cure of an artificial anus by any method of treatment, however simple, it is proper that some attention should be paid to the general health of the patient. If this be much deranged, it is obvious that it should be rectified, otherwise the case may proceed badly, or even terminate fatally. The secretions are to be restored; the diet is to be regulated; the bowels must be moved by mild aperients; and any local irritation that may exist is to be combated by frequent ablutions, anodyne fomentations, and emollient poultices. Leeches will seldom be necessary. This preliminary treatment is particularly called for when we wish to put in

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* American Medical Recorder, vol. xiii, p. 453.

execution the operation of enterotomy, autoplasty, or even the more simple one of the seton.

When the abdominal orifice is too small to admit of the ready application of the enterotôme, the use of the plug, or the passage of the seton, it must be dilated with linen tents or gum-elastic bougies. The foreign substances should not be introduced too frequently, or too forcibly, or for too long a time; and their use should not be attempted until the parts are divested of their tenderness and irritability. By proceeding cautiously in this manner, taking care gradually to increase the size of the tent, the abnormal passage may generally be dilated to the requisite extent within from two to four weeks. When the edges of the track are very thick and callous, the treatment will be greatly expedited by excising them.

After the operation has been performed, the patient must for sometime lie quietly upon his back, with the legs and knees drawn up, to relax the abdominal muscles and prevent undue compression of the parts. The diet must consist of nourishing broths or light soups, soft boiled rice, tapioca, arrow-root, or boiled milk and grated cracker. For his drink he may use demulcent fluids, as gum water, or flaxseed tea; the bowels should be calmed by anodynes, and the natural stools promoted by stimulating enemata. In short, every thing is to be done to avoid inflammation, both in the parts more immediately concerned, and above all in the peritoneum.

Of the various operations that have been devised for the radical cure of this loathsome and disgusting affection, the first that attracts our attention is the suture. The idea of employing enteroraphy is generally supposed to have originated with Lecat. However this may be, it is certain that a female laboring under this infirmity, was under the care of that celebrated surgeon in 1739, and would have been subjected to this treatment had she not become tired of the numerous attempts that had been made to replace the protruded and adherent gut.

The expedient was subsequently carried into effect by a surgeon of the name of Bruns; but instead of paring the edges of the opening, as had been suggested by Lecat, he contented himself with excoriating them with caustic. The case seemed to be going on favorably, when, on the third day, the ligature lost its hold, and the anus began to gape, followed by a discharge of fæcal matter. The patient, unwilling to submit to further trials, was abandoned to his fate.

The next attempt at this species of enteroraphy was made by Liotard;* but the result was not more fortunate. He pared the whole circumference of the abnormal aperture, and approximated the raw edges by two points of suture, aided by a favorable position and proper dressings. On the second day the apparatus was observed to be soiled by fæcal matter, and on exposing the parts the ligatures were found to have cut themselves out. Professor Blandin, of Paris, in a similar case, was equally unsuccessful. Indeed, Judey seems to be the only surgeon in whose hands the expedient has hitherto had a favorable termination: the artificial anus had existed four months, and the cure was complete.†

Desault, in the latter part of the last century, endeavored to cure this disease by compression.‡ He was aware that the chief obstacle to the reparative process was the septum between the two ends of the tube, by which the fæculent and other matters were diverted from their proper channel, and forced out at the preternatural orifice in the wall of the abdomen. The removal of this projecting piece constitutes, therefore, a most important indication in the treatment. To fulfil this, Desault used long linen tents, which he introduced and fixed in the two ends of the gut, taking care to renew them as often as they became soiled and offensive, which generally happened once or twice in twenty-four hours. In this manner he gradually effaced the abnormal angle, and

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* Diss. Sur. le Traitement des Anus Contre Nature. Paris, 1819.

† Archives Generales de Medicine, T. i, p. 291.

‡ Surgical Works; Translated by Smith, vol. i, p. 306. Philadelphia, 1814.

brought the two cylinders into a straight line; at the same time he dilated the lower orifice, and thus placed it in a more favorable condition for receiving air and fæcal matter. Along with these means he kept the outer opening closed by a well-adjusted compress, for the two-fold purpose of preventing the escape of the fæces, and of forcing them on towards the rectum. When the dilatation was sufficiently advanced and the intervening septum nearly effaced, he discontinued the long tents, and merely retained the external plug, applying it more superficially lest it should interfere with the transmission of the contents of the tube, and so become an obstacle to the restorative process. If it succeeds, the good effects of this method are announced by slight colicky pains and rumbling noises in the belly, followed at first by a discharge of wind, and soon after by fæculent and mucous matter. In proportion as the natural passages are re-established the outer orifice diminishes in size, and the griping subsides. The cure is expedited by a light but nutritious diet, perfect rest, and an occasional enema.

Although this method of treatment has been repeatedly attended with the happiest results, it is obvious that it cannot be employed with a prospect of success in all cases. Of this Desault himself appears to have been fully aware, and he has enumerated the following circumstances as particularly calculated to oppose the cure, or as so many contra-indications: first, where the gut has suffered great loss of substance; secondly, where the intervening septum is too short, prominent, or difficult to be broken down; and thirdly, where the ends of the bowel, one or both, have contracted such firm adhesions externally as to render it impracticable to effect their reduction. In addition to these considerations it may be remarked that the process is generally very tedious, and well-calculated to exhaust the patience both of the surgeon and the sufferer.

The first instance in which Desault employed this mode of treatment is too interesting to be passed over on the present occasion. The case, in fact, has become memorable in the

annals of surgery. The following abstract of it is all that my limits will allow me to give.

Francis Vialter, a large, strong, and well-built man, a sailor and native of Moulins, was injured by the bursting of a bomb in May, 1786. The wound occupied the right side, and extended from about two inches above the inguinal ring to the bottom of the scrotum, where it had exposed the testicle. At the upper angle was a sort of appendix, very red, an inch long, and formed by the divided bowel, which retracted into the abdomen, whenever the parts were washed. In this situation an opening was left in the dressings for the discharge of the fæces. After having wandered about for four years, and visited all the principal hospitals of Europe in vain for relief, he entered the Hotel-Dieu of Paris, on the 29th of September, 1790.

The upper end of the bowel, from long exposure to the air, the friction of the clothes, and the contact of fæcal matter, had acquired considerable thickness, as well as density, and was of a conical shape, nine inches in length. Its base, which was somewhat contracted, seemed to proceed from beneath a fold of the skin, just above the inguinal ring; while the apex, inclined backwards, reached to the middle of the thighs, and ended by a narrow orifice, through which the fæces flowed. Nothing had escaped by the natural passage since the period of the injury, except a small quantity of whitish, ropy mucus, at intervals of three or four months. The whole surface of the tumor was red and wrinkled, like a villous membrane. On the outer side of this mass was another protrusion, much smaller but of the same color and consistence, oval in its form, and puckered like the mouth of a purse at the extremity, where it discharged a little serosity. The patient was extremely emaciated, and compelled, by the violent pains he experienced in the abdomen, to bend himself forward when he attempted to walk. An earthen pot, attached to the waist and suspended between the thighs, received the fæcal matter.

To reduce the swelling of the upper protrusion, without

which the bowel could not be restored to its natural situation, Desault used a simple roller, with which he covered the whole tumor from below upwards, by spiral and moderately light turns, leaving merely an orifice at the apex for the passage of the fæces. The effect of the treatment was extraordinary; the tumefaction rapidly subsided, and by the fourth day the intestine was in a condition to be replaced. Having accomplished this, he opposed the issue of the excrements by a thick linen tent, three inches long, introduced into the gut, and supported by an inguinal bandage. His idea was to remove this twice a day for the evacuation of the fæces; but in a short time the patient perceived a rumbling noise in the abdomen, accompanied with an acute sense of heat, and wind was soon expelled by the anus. Colicky pains occurred in the rectum, and half a pint of fluid matter was discharged by the natural route. The night following he had a number of evacuations of the same kind, preceded by similar feelings, and which left him somewhat languid in the morning. The passages became gradually more natural, the pains disappeared, and on the eighth day the tent was discontinued, the external opening being closed by a pledget of lint and several compresses, supported by a truss with a broad flat pad.

From this period Vialter rapidly recovered; he regained his flesh and strength, and voided his fæces without pain or inconvenience. A very trivial serous exhalation moistened, without staining, the lint which covered the *fistulous* orifice in the abdomen. Five months after he left the hospital, in attempting to lift a cask on his shoulders, his bandage broke, and the intestines again protruded, to the length of six inches, through the unhealed opening. The same treatment as on the former occasion was adopted with complete success.

A more effectual and less tardy expedient than that of Desault, was proposed, near the close of the last century, by Schmalkalken, a German surgeon. He has given an account of it in his Inaugural Dissertation, "Nova Methodus Intestina Uniendi," published at Wittemberg in

1798. The operation consists in perforating the septum with a seton introduced by means of a curved needle, and allowed to remain long enough to excite adhesive inflammation between the two contiguous cylinders of the bowel. The period necessary for this varies from a week to a fortnight, at the expiration of which the foreign body is withdrawn, and the portion of the partition lying between the outer orifice and the opening of communication excised with a pair of scissors or other suitable instrument. In executing the operation, it is of no little importance that the track made by the instrument is accurately filled by the thread or tape, otherwise fæcal matter might be effused into the peritoneal cavity. The seton ought to be carried as high up as possible, and care taken that it do not embrace a neighboring fold of the intestine.

Whether Schmalkalken ever performed this operation, of which he must undoubtedly be regarded as the inventor, it is impossible for me to say, as I have not before me a copy of the dissertation in which the account of it originally appeared, nor do I find the subject mentioned in any other work. The probability is that he did not; at all events, very little notice of it was taken even in Germany, while the profession of the remainder of the continent of Europe, Great Britain, and the United States appears to have been profoundly ignorant of it. I make this statement for the purpose of showing that the late Dr. Physick, of Philadelphia, who performed a similar operation in 1809, was not aware that it had been previously proposed, and that he is therefore justly entitled to a share of the credit of the discovery.

The case which fell under the observation of Dr. Physick, and which was probably the first of the kind treated by the seton, was that of John Exilius, a Swedish sailor, nineteen years of age, who was admitted into the Pennsylvania Hospital in October, 1808, for strangulated congenital hernia.*

* See an account of this case, drawn up by Dr. B. H. Coates, and published in the second volume of the North American Medical and Surgical Journal—also Dorsey's Surgery, vol. i, p. 96.

The sac being opened, the two coils of the bowel were found to be firmly adherent to the testicle, as well as partially to the abdominal ring, and one of them presented an opening of sufficient magnitude to permit the discharge of a considerable amount of fæces. There were, however, no marks of mortification, and the perforation was probably caused by ulceration. The symptoms were but slightly relieved by the division of the stricture, the patient continued very restless, and only a small quantity of matter flowed through the wound. Another operation was therefore performed, followed by much greater facility for the escape of the fæces. On the 24th of December, the projecting portion of the gut was cut off close to the ring, in the hope that the open orifices thus left would gradually retract within the abdomen. No good, however, resulted from this procedure, nor did any better success attend the method of Desault, which was employed soon after. It now occurred to Dr. Physick that relief might possibly be afforded by cutting a lateral opening through the sides of the gut; but not knowing to what extent they adhered to each other, he determined to pass a needle armed with a ligature from one cylinder to the other, about an inch within their respective orifices. This operation was performed on the 28th of January, 1809. The ligature, applied with moderate firmness, was secured with a slip-knot, and drawn to its original tightness whenever it became loose by the ulcerative action of the parts which it embraced.

After three weeks had elapsed, the ligature was removed and the parts in front of the opening which it had made divided with the bistoury. No unfavorable symptoms supervened upon this operation; on the 28th of February the patient had uneasy sensations in the lower portion of the abdomen, and on the 1st of March he extracted with his own fingers some hardened fæces from the rectum. Other evacuations followed; the discharge from the groin became inconsiderable; and the artificial anus gradually diminished in size. The patient was dismissed from the hospital on the 10th of November, in good health, but with a *fistulous* aperture in

the groin, the hope of an entire closure being abandoned. By wearing a truss with a compress and a large pad, stuffed in the common way, the escape of fæces was completely controlled.

By the French surgeons the honor of the discovery of this process is generally claimed for Dupuytren, by whom it was executed at the Hotel-Dieu in 1813, without any knowledge apparently that it had been recommended by Schmalkalken, and performed by Physick.* His patient was Francis Aucler, thirty-six years old, of excellent constitution, who had been affected from his youth with an inguinal hernia on the left side, from which, however, he had experienced no inconvenience until the 13th of May, when, in consequence of a violent attack of vomiting, it became strangulated. Five days after he was carried, in a state of great prostration, to the Hotel-Dieu, and the stricture carefully divided. The bowel being sphacelated was left at the outer opening, and an artificial anus followed. Through this the whole of the fæces were discharged. Six weeks having elapsed without the prospect of a cure, Dupuytren employed compression, but violent symptoms ensued, and he was obliged to abandon it. He then resorted to the seton. The operation was soon over, gave rise to scarcely any pain, and was not succeeded by any accident. Some days afterwards a skein was substituted for the thread, when flatus began to be expelled by the natural anus. The size of the seton was increased at each dressing, and in less than eight days the patient had a passage from the rectum, preceded by colicky pains. In dressing the sore one day the buttress in front of the foreign body was completely lacerated, without any other effect than a more easy flow of fæces from one end of the bowel to the other. Stercoraceous matter continuing to escape by the abnormal aperture, Dupuytren excised by means of blunt-pointed scissors, directed on the fore-finger, half a line of the septum which intervened between the two openings. The operation was cautiously re-

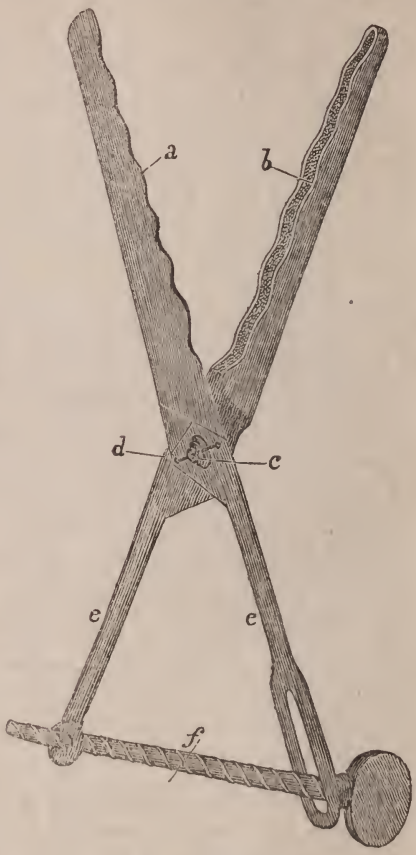
* Leçons Orales, T. ii, p. 236. Paris. 1832.

peated at intervals of three or four days, the new adhesions were never passed, and the communication was soon so free that the fæces were evacuated entirely by the accustomed channel. Compression was kept up on the artificial anus, and the case was going on well, when Dupuytren, yielding to the entreaties of his patient, who was anxious to expedite the cure, divided the partition higher up than he had done before. In a few hours acute peritonitis supervened, and the man died. On dissection, a large quantity of serum and lymph were discovered in the abdominal cavity, but no stercoraceous matter, or any opening by which it could have found its way in. The communication between the extremities of the gut was re-established for the space of two inches, and instead of being separated, as they had been previously, they were united by a sort of raphé or cicatrice, the remains of the former septum. In fact, it clearly appeared that, but for the peritonitis, a complete cure would have ensued.

Discouraged by this unhappy termination, Dupuytren determined to abandon the employment of the seton, and to devise some other expedient. After many trials on animals and the dead body, he finally invented an instrument which he called the *enterotôme*, and which is thus described in the second volume of his surgical lectures. It consists of a screw and two branches, each about seven inches long. One of these, which is called the male branch, as it is received by the other, has a blade four inches in length, three lines in breadth, and half a line in thickness at its edge, which is undulated, and terminated by a spheroidal button. At the junction of the blade with the handle is a mortise several lines in extent; the handle itself is from two to three inches long, and has another mortise four lines broad, which runs nearly from one end to the other. The female branch is somewhat shorter. It is composed of two blades, of the same length, breadth, and thickness as the small blade, which is received in the gutter, groove, or sheath between them. The bottom of this gutter is undulated, to correspond with the

irregularities of the male branch, and at the extremity is a cavity for lodging the spheroidal button of the latter. At the union of the groove with the handle is a moving pivot, which passes into the mortise of the other branch, and the handle itself is terminated by a hole to receive the screw. This last part of the enterotôme, a screw of several threads, is an inch and a half long, and ends by an oval plate; it is placed in the mortise of the male branch, and fixed in the female, its use being to separate or close at pleasure the two blades.

The accompanying wood cut conveys an accurate idea of the nature of this instrument. *a* Represents the male blade, *b* the female blade, *c* the joint, *d* the moving pivot, *e* the handles, and *f* the screw by which the branches are shut and locked.



Before applying this instrument the surgeon satisfies himself of the precise situation of the lower opening of the gut, which it is by no means always easy to do, and places the patient upon his back near the edge of the bed, with the abdominal muscles completely relaxed. Taking one of the blades

he conveys it upon the fore-finger into one of the orifices, to the requisite depth, and gives it to an assistant. The other is then introduced in the same manner into the other extremity of the tube, when they are joined together, like a pair of obstetric forceps, by putting the tenon of the one into the mortise of the other. The partition must be embraced to an extent of one, two, or three inches, according to the nature of the case; and the pressure, which is regulated by the screw, should be strong enough to destroy the vitality of the part the first few hours, as this will prevent pain and inflammation. It should afterwards be increased every forty-eight hours, until the enterotôme falls off, which it usually does from the seventh to the tenth day, along with the mortified portion of the partition. The operation is rarely attended or followed by any unpleasant symptoms, and the opening which it leaves generally affords free passage to the fæcal matter from one extremity of the bowel to the other.

From a statement published by Dupuytren in the work previously referred to, it appears that from the time he first employed this instrument until 1824, twenty-one operations had been performed by himself, and twenty by other practitioners. Three-fourths of the cases were caused by gangrene from strangulated hernia, and the remainder by penetrating wounds, with more or less loss of substance of the tube. Of the whole number thus treated three only died; one from supposed fæcal effusion into the abdomen, one from indigestion, and one from acute peritonitis. Of the thirty-eight that survived, none experienced any ill effects except a few who had colicky pains, nausea and vomiting, but were promptly relieved by effervescing draughts, leeches to the anus, and fomentations to the belly. The success was not equally great in all the cases. Twenty-nine were radically cured in from two to six months, and the rest retained, in spite of all that could be done, fistulous openings, which compelled them constantly to wear a compress and bandage, to prevent the

escape of air, mucus, bile, and even fæces. "It would thus appear," says Dupuytren, "that the mortality from the use of the enterotôme is one in fourteen; or, if we exclude the case of indigestion, which cannot be fairly ascribed to the application of the instrument, it is reduced to one in twenty; a result much more favorable than that which usually attends the great operations of surgery."

One cause of failure of this operation, as was intimated in a previous page, is the want of adhesion in the sides of the opening made in the epéron, or septum. Velpeau relates the particulars of a case of this kind which fell under his own observation, and similar examples have occurred in the hands of other surgeons. His patient was a man fifty-six years old, who had a crural hernia of the left side since the age of eighteen: it was somewhat bigger than a hen's egg, became strangulated on the 17th of April, and was operated upon on the 27th of the same month. The intestine was found mortified, and the fæces soon after commenced passing through the wound. The enterotôme, applied on the 14th of May, was removed on the 21st, and the man expired on the 22d, death having been preceded by violent colicky pains, tympanites, and great tenderness on pressure of the hypogastric region. The lips of the two ends of the bowel were quite detached, and the margins of the opening in the intervening septum were adherent only on one side. Thus a free communication was established between the tube and the cavity of the peritoneum, which had become extensively inflamed from the contact of stercoraceous matter, and was filled with sero-purulent effusion.*

It can hardly be doubted that this case would have had a very different termination, had a longer period been allowed to intervene between the application of the enterotôme and the operation for the strangulated hernia. The attachments

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* Velpeau, Medicine Operatoire, T. iv, p. 157.

between the ends of the intestine and the parietes of the abdomen were not sufficiently firm to resist the traction occasioned by the presence of the instrument, and hence the aperture which permitted the fæcal matter to pass into the abdomen. The want of union in the sides of the opening made by the enterotôme was probably caused by the unhealthy condition of the parts, which indisposed them to adhesive inflammation.

Some difference of opinion still exists respecting the propriety of closing the blades of the enterotôme on their first application so firmly as to destroy at once the vitality of the intervening septum. Dupuytren appears to have pursued this practice in all the cases which he treated with this instrument, without experiencing any ill effects from it. In the hands of others, however, the results have not been so successful. Jobert in particular objects to the plan on the ground of its liability to be attended with severe suffering. In all the cases witnessed by himself the patients were affected with fever, heat of skin, colicky pains, and vomiting; the countenance was livid and contracted, and the symptoms closely resembled those of strangulation. He refers to a case that occurred at the Hotel-Dieu of Amiens, were death was produced by the pressure of the enterotôme, and adds that examples of a similar description have been recorded by different practitioners.* He, therefore, advises that the instrument should be applied rather loosely in the first instance, and gradually tightened until it produces the desired effect. My own experience does not enable me to speak positively on this subject one way or another. In one case in which I employed the enterotôme the blades were applied with great firmness, and yet no unpleasant symptoms followed. The practice seems to me to be perfectly rational, and where bad effects follow, the pressure of the instrument may be diminished at any moment.

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*Traité des Maladies du Canal Intestinal, T. ii, p. 126.

The following is an abstract of the first case in which Dupuytren employed the enterotôme on the human subject. Ménage, twenty-six years of age, was admitted into the Hôtel-Dieu, in January 1816, with an artificial anus in the right groin, produced by gangrene of the bowel twelve months previously. At first the evacuations were passed through the abnormal opening; but eight weeks after the operation, which had been performed for his relief, he was attacked with colicky pains, and had several natural stools, which afterwards recurred, though at long intervals. On his admission, the artificial anus was at least half an inch in diameter, and surrounded by irregular projections of the lining membrane of the gut, while behind a hernial protrusion appeared whenever he exerted himself, and frequently gave rise to invagination of the intestine. The skin around was raw and sore, the suffering severe, the stench intolerable. Having allayed the irritation of the parts, the blades of the enterotôme were separately introduced, as high as they would go, into each portion of the canal, and closed with considerable firmness. No pain was felt, and the next morning the pressure was increased, when slight colic was experienced. In a few days the blades became somewhat moveable. On the sixth, the man had several small evacuations by the natural outlet, and, on the eighth, the instrument fell off, holding in its grasp a membranous band, twenty lines in length by two in breadth. From this period the fæces passed by the rectum, but the artifical anus, though narrowed, still continued open, notwithstanding the employment of pressure, adhesive plaster, and lunar caustic. At length the edges were pared off, and brought together by the twisted suture, aided by a particular instrument. At the expiration of four months the patient was exhibited to the Faculty of Medicine, entirely cured of his infirmity.

Several surgeons, impressed with the conviction that the enterotôme of Dupuytren does not fulfil all the indications which may be expected from such an instrument, have endea-

vored to modify and improve it. It is not necessary to notice all these attempts; I shall glance only at a few of the more important, inasmuch as the principle is the same in all.

Liotard,* a French surgeon, recommends an enterotôme, the blades of which end each in an oval ring, an inch and a half in length by nine lines in width, and so constructed that the blunt crest of one is received in the corresponding gutter of the other. With this instrument he proposes to cut a hole *through* the septum, instead of destroying it from before backwards, as in the method of Dupuytren. He alledges that, when thus executed, the operation is followed by a free passage for the transmission of the fæces, and that the two extremities of the gut are more apt to regain their accustomed movements in the cavity of the abdomen. On the other hand, it has been urged that this instrument is not only difficult of introduction, but that it is liable to grasp a neighboring coil of the intestine or a fold of the omentum. This objection, however, if it is not entirely chimerical, as I am disposed to believe it is, is no more applicable to this contrivance than to the original; which, as has been seen, often embraces the septum to the extent of two, three, or even four inches, without any ill effects. The only objection that I can perceive is, not against the enterotôme itself, but to the manner in which it is used. The portion of the partition left undivided in front, or between the outer orifice and the opening of communication, might possibly interfere with the reparative process, but I am not certain that it would even do this. That it would prevent the cicatrization of the sore, and predispose to the formation of a permanent fistula, as some have pretended, is not very probable.

The only instance in which, so far as my information ex-

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* Diss. Sur le Traitement des Anus Contre Nature—Dict. de Medicine, T. iii, p. 365—Jobert, op. cit. T. ii, p. 129—Malgaigne, Med. Operat. p 572.

tends, the enterotôme of Liotard was used on the human subject, has been recently related by Blandin.* The disease, in this case, was caused by strangulated inguinal hernia, in which six inches of intestine had become gangrenous. The two extremities of the tube lay parallel with each other; the fæcal matter escaping from the superior, which was very tumid externally, and readily admitted the finger. The inferior one was more contracted, and its diameter daily diminished. The superior end formed an irreducible tumor, which Blandin comprehended in a ligature, and it sloughed off on the fourth day. He then constructed an enterotôme composed of two branches, each of which terminated by an oval ring, from eighteen to twenty lines in length, and from six to eight in breadth; the internal surface being marked by alternate elevations and depressions. This instrument was introduced into the extremities of the bowel, to a depth of four or five inches, and compressed by means of a screw. Abstinence and rest were enjoined; no bad symptoms ensued; and the enterotôme separated on the fifth day. On the same evening the patient voided solid fæces by stool for the first time during an entire month. Gas and a yellowish green fluid continued to escape for sometime at the external orifice; but this gradually ceased, and the cure was completed in two months after the employment of the instrument.

Another modification of the enterotôme was proposed by the late Professor Delpech of Montpelier.* He was of opinion that the original instrument divided the partition to too great extent at one time, and that the application of it was liable to be followed, from the contact of fæcal matter, by protracted suppuration, together with ultimate contraction of

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* Archives Generales de Medicine, T. xii, Nov. 1836.—British and Foreign Med. Review, vol. iii, p. 520.

* Observations sur l'Anus Artificiel; Mémorial des Hôpitaux du Midi, Février, 1830, p. 76.

the parts, and a partial re-production of the ridge. These inconveniences he thought might be obviated by the more gradual division of the intermediate structures; and for this purpose he devised an instrument fashioned somewhat like a compass, with thin, hollow branches, slightly curved, and terminating each in a sort of spoon, an inch long, and provided with a blunt rim. The branches are united by a screw, and are introduced separately into the bowel upon an ebony gorget. The enterotôme is then locked and secured by a thread or tape to a bandage round the corresponding thigh. When the spoons are applied it is said that they embrace the septum to the extent of *four inches in depth by upwards of an inch in breadth.** Nevertheless, Delpech considers this instrument a valuable improvement, and has published a case in which its employment was followed by complete recovery.

The most important modification, perhaps, of the enterotôme, if indeed it may not be regarded as an entirely new instrument, was suggested in 1827 by Reybard.† It is difficult to convey an intelligible idea of it without the assistance of a drawing. In its general form it resembles a pair of dissecting forceps, slightly curved on the surface for two inches, or to within a short distance of its junction with the branches, which are themselves four inches long, and rounded off at the end. The branches are, moreover, flattened in their entire extent, and fenestrated in the same direction from their origin to within two or three lines of their extremity. Near the handle, on each side of the gutter or slit-like opening just alluded to, are two screws by which the instrument is closed and locked. Introduced into the upper and lower end of the gut, they firmly hold and compress the septum, without contusing it, or depriving it of its vitality. Adapted to the fenestra of the upper branch is a moveable knife, designed

* Dict. de Médecine, T. iii, p. 365.

† Mémoires sur le Traitement des Anus Artificiels, et des Plaies des Intestines. Lyon et Paris, 1827.

for dividing the partition to the extent of two or three inches. This section would be attended with hemorrhage, were it not for the pressure exerted by the instrument, which is kept on for about forty-eight hours, or until the adhesions in the adjacent structures are sufficiently firm. In two cases in which Reybard employed his enterotôme, the operation produced hardly any pain, no bad symptoms ensued, and the patient rapidly recovered.

Finally, a new enterotôme, regarded by some American surgeons as a valuable improvement on that of Dupuytren, was invented in 1835, by Dr. J. R. Lotz, of New-Berlin, in the State of Pennsylvania.* The blades, which are six inches in length, terminate each by an oval fenestra, twelve lines long by three in breadth, and surrounded by a narrow, solid rim. They are articulated in the following manner. At the upper extremity, or that which in forceps answers to the joint, and also at the middle of one of the blades, are two steel slides, which are fitted into mortice holes in the corresponding parts of the other blade. Near each of these slides is a screw, of which the posterior passes through one blade, and simply presses on the other, to regulate the distance between them, while the one at the centre of the instrument extends through both blades, approximates them, and presses the edges of the fenestræ against each other.

The mode of applying this instrument does not differ from that of Dupuytren. The blades being unscrewed, and inserted separately into the intestinal orifices, the two slides are introduced into the mortice holes, and the fenestræ brought upon a line with each other. "The central screw is now introduced, and the adjusting screw having been previously turned far enough to allow for the thickness of the double walls of the intestine included between the pinching extremities, the central screw is tightened until the edges of the fenestræ press firmly upon the intervening membranes. By unscrewing the adjusting screw and tightening the central

* American Jour. Med. Sciences, vol. xviii, p. 367.

one, the pressure can be increased to any requisite degree without destroying the parallel direction of the blades."

Dr. Lotz, I believe, has employed this instrument only on one occasion. His patient was a woman forty-one years of age, and the disease, caused by a gangrened hernia, had existed four or five weeks. On the fourth day after the operation, he excised, with a gum-lancet, the portion of the septum corresponding with the fenestræ, and established a direct communication between the two ends of the tube. The instrument was now gradually slackened, and in a week it was removed altogether. On examining the parts, a smooth circular hole was found, about the dimensions of an inch, with the bowel firmly adherent all around. When the case was reported, several months after the operation, the fæces passed nearly all by the natural channel, and the patient was far advanced in utero-gestation. Whether complete recovery ultimately ensued, I am not able to state, as no further account of the case has, I believe, been published.

Having had occasion recently to treat a case of artificial anus, it occurred to me that an enterotôme might be devised, much more simple, and in all respects much better adapted to the purpose, than any of those noticed in the preceding pages. Accordingly with the assistance of Mr. Erringer, an ingenious cutler of this city, I had an instrument constructed, of which the following is a description. In its general appearance, it closely resembles an artery-forceps, being composed of two blades, and of an intermediate catch. Each blade is five inches in length, and terminates anteriorly in an oval ring, eighteen lines long by eight in width. In thickness the ring does not exceed the twelfth of an inch; it is smooth and convex externally, but the inner surface is undulating, or marked by alternate elevations and depressions. The catch by which the blades are closed is situated at the centre of the enterotôme, and is furnished with a rack, for the purpose of regulating the amount of pressure when it is applied to the epéron between the two ends of the bowel. The weight of the instrument is scarcely half an ounce.

The annexed drawing, prepared by my friend Dr Bayless, will explain the nature of this new enterotome more satisfactorily than any description, however elaborate. Figure 1, represents the two blades, the manner in which they are connected behind, and the rings in which they end in front. When they are closed, the depressions of one ring receive the elevations of that of the other, and thus prevent the instrument from losing its hold. Figure 2, exhibits the catch and the arrangement of the teeth of the rack.

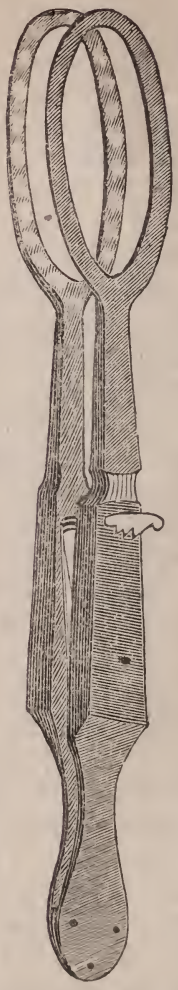

fig. 1.

fig 2.

The instrument here described and delineated, I have not had an opportunity of employing upon the human subject. In the case adverted to I used an enterotôme of a more clumsy construction, the blades of which, connected by a hinge-like joint, were closed by a central screw, and terminated each in an oval ring, about twelve lines long by eight in width, and perfectly smooth at the inner surface, instead of being rough and undulating, as in the new instrument. It was applied with great firmness, and dropped off at the end of the sixth day, including the portion of the septum which it had embraced. No

bad symptoms followed the constriction. For the first few hours there was some uneasiness in the part, and the patient, a colored boy, sixteen years of age, complained of slight nausea. These, however, rapidly subsided, and did not subsequently recur. As the case is still under treatment, I shall content myself with the following abstract of it, intending to present a more full report at some future period.

In December, 1840, as I learn from Dr. Ford, of Somerville, Tennessee, the boy was caught in the machinery of a cotton-gin, by which the parietes of the abdomen were torn open at their lower part; the wound extending, on the one hand, from the pubic symphysis to within an inch of the umbilicus, and, on the other, from a short distance above the anterior superior spinous process of the ilium of one side to that of the other, forming a large flap, which was drawn up so as to expose the small bowels. The accident was attended with very little hemorrhage. Dr. Brackin, who saw the boy soon afterwards, brought the edges of the wound together by stitches and adhesive straps, aided by a suitable bandage. Perfect quietude was enjoined, and the most rigid antiphlogistic regimen adopted. After some days the flap alluded to sloughed off, when it was ascertained, for the first time, that the small bowel had sustained some injury. In a few months the opening had contracted to about one-fourth the original size, the intestine adhered firmly to the margin of the artificial anus, and the passage of fæcal matter was easily controlled by a compress and bandage. Several attempts were subsequently made to close this outlet, but they all proved unsuccessful.

When the boy was sent to me, last March, the opening, situated on the left side of the median line, nearly midway between the groin and the umbilicus, was of an oval shape, two inches in its transverse diameter, and fifteen lines in the vertical. The surrounding parts had a raw, excoriated appearance, and the bottom of the ulcer was formed by the two ends of the bowel, lying parallel with each other, the upper orifice being external, the inferior internal. The sore was

nearly half an inch in depth; the edges were bevelled, or depressed towards the centre, and nearly all the fæces flowed in this direction, except when the parts were protected by a compress and bandage. When in the erect posture, there was, at times, a considerable protrusion of the mucous membrane, especially of that of the lower end of the intestine. The intervening septum was well-marked, and formed a serious obstacle to the transit of the fæcal matter from one orifice to the other. The boy's appetite was good, and his general health unimpaired.

Having destroyed the intervening septum by means of the instrument above alluded to, the fæcal matter soon passed, in great measure, along the natural route; but there was no disposition whatever in the opening to contract, owing to the loss of muscular substance. Under these circumstances, I pared away the edges of the protruded mucous membrane of each end of the bowel, and approximated them by several points of the interrupted suture. In this manner I succeeded in obtaining a considerable degree of union; and by repeating the operation, as has been since done a number of times, the opening is so far closed that there is now, June the 20th, only a small slit-like aperture at each angle of the ulcer. By perseverence I shall be able, I think, to effect complete adhesion between the parts, and relieve my patient of his loathsome disease.

In 1820, Mr. Collier,* a surgeon of London, conceived and executed the plan of curing an artificial anus by a sort of *autoplastic* operation. The patient was a male servant, and the aperture, occasioned apparently by a stercoraceous abscess, occupied the right groin, being large enough to admit two thumbs. When Mr. Collier first saw him, two or three months after the formation of the artificial anus, it had considerably diminished in size, and was surrounded by callous edges. When the bowels were constipated the fæces escaped chiefly by the abnormal opening, but when they were relaxed,

* London Medical and Physical Journal, vol. lxiii, p. 466.

or under the influence of medicine, nearly all came away by the natural route.

After several failures to unite the parts by suture and other means, Mr. Collier determined, if possible, to effect a cure by an operation on the principle of Taliacotius. With this view, having pared away the indurated margins of the sore, and converted them into a raw surface about twice the diameter of the artificial anus, he dissected off an adequate cutaneous flap immediately above it, and placing it over the aperture, maintained it by four stitches. A compress and truss constituted the dressings. Complete recovery ensued, without any unpleasant symptoms.

A similar operation was lately executed, with the same happy results, by Mons. Blandin. An account of this interesting case will be found in the Memoirs of the Royal Academy of Medicine of Paris, for 1838, and also in the "Gazette Médicale" for July of the same year. The patient was a countryman, aged fifty-two, and the artificial anus, produced three years previously by a gangrened rupture, was situated in the inguinal region of the right side where it communicated with the cœcum. Nearly all the fæces passed out at the abnormal opening, which was of a circular shape, and sixteen lines in diameter. There was occasionally also a considerable protrusion of the bowel. After the failure of the more ordinary methods of treatment, a quadrilateral flap of the skin and cellular substance was made just below the opening, by three distinct incisions, and dissected up for the space of nearly two inches, being left adherent by one of its edges to the inguino-crural region. The integuments over the superior internal and external margins of the opening were then removed to the extent of about three lines, when the flap was drawn up and put in contact with the parts, with its bleeding surface looking backwards, and the points of suture placed beyond the circle of the artificial anus. A piece of linen spread with cerate, a layer of charpie, a few compresses, and a truss with a weak spring, formed the dressings. By the fourth day the flap had perfectly united, both externally

and internally, except superiorly, where it became necessary at the end of a fortnight to pare away the opposing edges, and bring them together by the twisted suture. The adhesion after this operation was almost complete, two little holes only remaining, and these speedily cicatrized under the use of the nitrate of silver. The walls of the abdomen were preternaturally feeble at this point, and required to be supported by a truss.

This plan has likewise been tried by Velpeau, but without success. On the second day a yellowish serosity with stercoraceous air was observed to escape between the sutures, and the flap was seized with gangrene extending from its edges towards the pedicle by which it adhered to the neighboring parts. The operation of Collier appears to be more particularly applicable to those cases of the disease which are unattended with an intervening septum, and in which the gut retains its normal caliber, or nearly so. It will also be more likely to succeed where the outer orifice is small, and the margin soft and healthy. Under opposite circumstances it can hardly be attempted with the prospect of a favorable result.

Another method, somewhat analogous to the preceding, was put in practice a few years ago by Velpeau.* It consists in making two semi-elliptical incisions around the preternatural aperture, about fifteen lines exterior to it, and in approximating the parts, previously made raw, by several points of suture. The new wounds are filled with charpie, and the dressings are completed by the application of a compress and bandage. The ligatures, which are all introduced before making the lateral incisions, are tied with moderate firmness, and carried through the parts in such a manner as to prevent them from tearing out, or injuring the bowel or peritoneum.

This new operation was executed by Velpeau, for the first time, on the 15th of November 1835. His assistant was Dr. Mott, of New York, and the patient a young man from Nor-

* Médecine Opératoire, T. iv, p. 153.

mandy. As a preliminary step, he pared away the margins of the abdominal aperture, obliquely from the circumference towards the centre, and in such a manner as not to injure the gut, or its mucous membrane. He next introduced four sutures, at intervals of two lines from each other, and with the precaution of not penetrating the abdomen or the intestine. A semi-lunar incision, two inches long, and including the skin, cellular substance, and aponeurosis of the external oblique muscle, was now made around each side of the artificial anus, twelve or fifteen lines beyond it. The parts being cleansed, the operator tied the sutures, and laid a roll of charpie in each lateral wound, to separate its edges, before he applied the dressings.

Three days after the operation there was such an accumulation of alvine matter as to render it necessary to cut away the sutures. The edges of the sore were washed, and the patient, kept as quietly as possible, was allowed a more liberal diet. On the 30th of December the purulent discharge had almost ceased, and by the 4th of January 1836, the fæces had entirely resumed their accustomed route. To render the cure more certain, the patient remained in the hospital until the 8th of February.

The object of this ingenious operation, as will be readily perceived, is to bring the raw margins of the outer orifice in contact with each other, to facilitate their re-union. The artificial anus is thus converted, to use the language of Velpeau, into a sort of basin, the bottom of which is sensibly smaller than the entrance or mouth. The approximation, easily accomplished by the lateral incisions above described, has the effect of completely closing the intestinal portion of the orifice. A strict regimen, perfect quietude, and a gentle enema every evening, will promote the cure.

In 1827 Mons. Colombe,* a French surgeon, suggested the idea of re-establishing the continuity of the two extremities of the bowel by means of a large gum-elastic tube, slightly

* Biblioth. Méd. T. i, p. 389, 1827.

curved, and from two to three inches in length. This is introduced, first, into one end and then into the other, with the concavity resting against the epéron or septum, and secured by a ligature, passed through its anterior wall, to the outside of the abdomen. It is retained in this situation until the passage for the fæcal matter is sufficiently restored, and the external aperture nearly closed, when it is removed, and the case managed in the usual manner. This method was tried by Velpeau* in 1831, but his patient died three days after under symptoms of acute peritonitis. The intestine had been perforated at its posterior part, and the tube projected across the opening, but whether as cause or effect, could not be ascertained.

Another proceeding which has been lately proposed is *excision* of the intervening septum. The operation was first performed, a few years ago, by Mons. Raye, a French surgeon. He seized hold of the epéron or partition between the two ends of the bowel with a pair of polypus-forceps, and cut out a large V-shaped flap with the scissors. No untoward symptoms followed the operation, and the patient promptly recovered. The particulars of this interesting case will be found in the "Gazette Médicale" for 1838.

The artificial anus is occasionally found to open into the vagina, as in the interesting cases mentioned by Casamayor and Roux. In the first of these the posterior wall of the vagina was lacerated during a severe and protracted labor. A fold of the ileum, lying in front of the rectum, was forcibly compressed during the descent of the child's head, and, although it contracted firm adhesions to the tube in question, it became subsequently, like the rest of these parts, involved in gangrene; the deplorable disease alluded to was the consequence. To remedy this, Casamayor endeavored to establish a communication between the ileum and the rectum, so as to divert the fæcal matter from the vagina, which was nearly obliterated by the wound or rent, and make it pass directly

* Médecine Opératoire, T. iv, p. 153.

from one of these intestines to the other. He accordingly constructed a pair of forceps, six inches and a half long, the blades of which were about the diameter of a large quill, and curved in such a manner as to intercept a free space at their base. Anteriorly they terminated each by a ring eight lines long by four in breadth. The patient being placed upon her back, one of the blades was carried along the vagina into the small bowel, about an inch and a half above the abnormal opening, and the other to the same height into the rectum. Having ascertained that the enterotôme embraced nothing but the opposed parietes of the intestines, the blades were approximated and locked. No evil consequences ensued. The instrument was removed six days after its application, leaving above the intestino-vaginal orifice an opening through which the fæces flowed directly from the ileum into the rectum. From this time the natural stools began to be re-established, a small quantity of matter only passing along the vagina. Unfortunately at this period the woman was attacked with a violent inflammation of the lungs and pleura, of which she died in four days.*

In the case related by Roux the procedure was entirely different. After breaking up the adhesions between the bowel and the vagina, he attempted to unite the two ends of the intestinal tube by suture; but the woman soon died from the effects of the operation.†

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* Dict. de Méd. et Chir. Pratiques, T. iii, p. 169.

† Dict. de Médecine. T. iii, p. 371.

REVIEWS.

Art. II.—*Mémoire sur les Rétrécissements Organiques du Canal de l'Urètre et sur l'Emploi de Nouveaux Instruments de Scarification, &c.*

Memoir on Organic Strictures of the Urethra and on the Employment of new Scarifying Instruments for the Radical Cure of that Disease; with plates. By Martial Dupierris, M.D., of New-Orleans; 8vo. p. 120: Paris, 1840.

The work of Dr. Dupierris, without laying any claims to the character of a complete systematic treatise on organic strictures of the urethra, presents an excellent outline of the existing state of the science in relation to that important malady, with an account of a new set of scarifying instruments which appear to be well adapted to the object for which they are intended. During his residence in New-Orleans he devoted much attention to the study of this class of affections, and had ample opportunities of testing the value of the various modes of treatment pursued by surgeons. The first forty pages of the memoir are occupied with an account of the anatomy and physiology of the urethra, the nature, seat, causes, and diagnosis of strictures, and the manner of exploring that canal. The remainder is devoted to the discussion of the treatment of the disease, and to the recital of eleven cases in which the author successfully employed the method of scarification with the instruments of which he is the inventor, and to which we shall presently more particularly refer.

As Dr. Dupierris very justly remarks, there is still much contrariety of opinion respecting the seat of this affection. Hunter, who alledges that he has never witnessed it in the prostatic portion of the canal, observes that it is most commonly met with near the bulb, and similar statements have been made by Desault, Chopart, and Sœmmering. According to Ducamp the disease exists five times out of six at the distance of from four inches and a half to five and a half from the meatus urinarius. The same writer states that, in a very great number of patients, he has found the disease only twice at the external orifice of the canal, and in only two other cases two inches further down. Boyer does not admit the opinion of Bell, who says he has never met with stricture behind the internal "fascia" of the perinæum. The French surgeon declares that the obstruction ordinarily occupies the membranous portion of the tube, and that it is rarely observed below the penis. In twelve patients spoken of by Lallemand the disease existed at the curve of the urethra, or a little beyond it: in one case only did it occupy the straight portion of the canal. He concludes from an examination of the cases recorded by Ducamp that, in twenty-nine strictures found in sixteen individuals, eleven occurred at the distance of a little more than five inches and a half from the outer orifice, four at a little less than four inches and a half, and only fourteen at the place indicated by Ducamp. These facts, added to those derived from his own experience, lead him to believe that strictures are often seated at the neck of the bladder. Differing from this, again, is the opinion of Civiale, who has, perhaps, devoted more attention to the subject than any other writer of the present day. According to him, the only regions in which true organic strictures are found are, first, the external orifice of the canal; secondly, the two extremities of the navicular fossa; thirdly, the anterior part of the spongy portion; and fourthly, the sub-pubic curve at the junction of the bulbous and membranous divisions.

In nine cases in which the author carefully noted the distance of the disease from the external orifice, it was found

in three between two and three inches; in three at about five inches; in two at six inches and a few lines; in one at three inches. These results, it will be observed, do not differ materially from those obtained by Civiale.

Mr. S. Cooper* thinks the disease most commonly occurs just behind the bulb of the urethra, the distance from the external orifice being six and a half or seven inches. The situation, next in order of frequency, is about four inches and a half from the orifice of the glans. Strictures, he says, do also form at three inches and a half from this point, and sometimes almost close to it. In some cases the external orifice itself is contracted. Mr. Hunter never met with the disease in the prostatic portion of the urethra. In almost all the cases observed by Sir Everard Home,† there was one stricture about seven inches from the mouth of the canal, whether there were others or not. Mr. Syme states‡ that the most common seat of the malady is at the bulb, about six inches from the extremity of the penis. The one next in point of frequency is at the part where the penis bends upon itself when pendulous, which is about three inches and a half from the orifice. The other situations particularly exposed to its occurrence are the neck of the glans and orifice of the urethra.

We have referred to some of the principal authorities upon this subject for the purpose merely of showing their contradictory character, not with the hope of throwing any useful light upon it. The fact is, organic strictures of the urethra may occur in any part of its extent anterior to the prostate gland; but the question as to whether they are more frequently seen at one point than at another can scarcely be said to be finally settled.

The diagnosis of strictures of the urethra can be satisfactorily determined only by a careful examination. This, the author thinks, should not be limited, as is too generally the

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* First Lines of Surgery, vol. ii, p. 274.

† Practical Observations on Strictures.

‡ Principles of Surgery, third edition, p. 348.

case, to the internal surface of the canal, but should be extended to the exterior of the penis. By passing the thumb and forefinger lightly along the course of the urethra we may often derive important information not only in regard to the seat and number of strictures, but also in respect to their size and consistence. This is particularly true of the part of the canal anterior to the perinœum; behind this point this external exploration is more difficult.

Having briefly discussed the treatment of strictures by dilatation and cauterization, as practised by many of the surgeons of the present day, Dr. Dupierris comes to the subject of scarification, the part of the work with which we are more particularly interested. The instruments which he has devised for this operation, and which he thinks are entirely free from the objections that have been urged against those of Amussat, Stafford, Ricord, and others, cannot be fully understood without the aid of a drawing, but the following account will serve to convey some idea of them.

A silver tube, either curved or straight, from two and a half to three lines in diameter, and of the length of a common catheter, presents, about half an inch from its vesical extremity, an enlargement or knob, four lines in extent; this knob is so arranged that it may be taken off or removed at pleasure, and supports a narrow or constricted portion, about two-thirds of an inch long, blunt at the free extremity, and cleft at the side, for the accommodotion of what may be called the *stricture-blade.* This little instrument is nearly oval in its form, pointed at the free end, blunt at the other, sharp at the edges, and secured to a silver rod in the interior of the tube; this latter has a sort of button-shaped head, and by moving this back and forth the stricture-blade is made to project across the lateral cleft adverted to, and so carried through the seat of the disease. In the curved instrument the blade is fastened to the internal rod by means of a piece of chain, which is so constructed as to be solid in its entire extent.

Before the operation is undertaken it is frequently necessary

to combat the inflammatory disposition of the urethra. In some persons, indeed, the sensibility of the canal is so exquisite that they cannot tolerate the slightest attempt at the introduction of a sound or bougie. In such cases the tepid bath is indicated, together with demulcent drinks, fomentations to the hypogastric region, and local or even general bleeding. Injections of a weak solution of nitrate of silver or of a watery infusion of opium or belladonna, occasionally answer a very good purpose; but an indispensable condition in all cases, is to accustom the urethra to the presence of small bougies, the size of which is to be gradually increased until the canal admits of complete distention. This preliminary treatment is to be conducted with great care; the bougie is to be introduced very gently, and no attempt is to be made to scarify the stricture until the parts are in a proper state.

When this object has been accomplished, the coarctotôme, for so the instrument is called, is oiled, and introduced in the same manner as a common catheter, sound, or bougie. If there is any difficulty in engaging the beak of the coarctotôme in the stricture, it may be easily surmounted by moving it in a lateral or circular direction, taking care at the same time to make gentle tractions on the penis. The resistance offered to the instrument, and the finger applied to the seat of the obstruction, will indicate whether the beak is in the proper situation or not. When this has been ascertained, the surgeon moves the internal rod of the coarctotôme forward and backwards, and thus divides the stricture longitudinally on one side. When the stricture involves the greater part of the canal, or its entire circumference, and it is deemed advisable to incise it at several points, it is only necessary to turn the instrument, which can be done without the trouble or inconvenience of withdrawing and re-introducing it.

The moment the incisions are completed the instrument is pushed from before backwards, in order to engage the knob or enlarged portion previously adverted to, in the part of the urethra beyond the seat of the obstacle. It is then withdrawn, and a leaden or pewter bougie substituted. This is

allowed to remain in for two days, being removed only when the patient has occasion to void his urine, and replaced immediately afterwards. At the end of this time a bigger instrument is introduced, and in this manner the treatment is conducted until the canal is capable of receiving one of the largest size.

The operation is rarely attended with much pain, nor does it give rise to any but the slightest hemorrhage. When the stricture is not very large or firm, one or two scarifications are generally sufficient; but where the contrary obtains it may be necessary to repeat them as often as six or eight times, at intervals of as many days. The cure is indicated by the size of the stream of urine and the absence of local uneasiness. Very little after treatment is necessary beyond the employment of emollient injections. When suppuration ensues, and there is a considerable discharge of pus, which, however, does not often happen, a gum-elastic bougie, smeared with simple cerate, may occasionally be introduced, and repeated until the little wounds are cicatrized. Some inequality or roughness now and then remains at the scarified part, especially when the healing process has been tardy and imperfect; to remove this, the best remedy is cauterization, conducted in the same manner as when we wish to destroy a stricture in the first instance.

Most writers suppose that the cure of strictures by this operation is effected altogether on mechanical principles; but this is not the case. The little incisions made by the coarctotôme are, it is true, filled with plastic lymph, but none of this substance remains after the cicatrization is completed, while it is equally certain that the organized matter upon which the obstruction depended is in time entirely absorbed. The process, therefore, by which the cure is brought about is a vital, not a mechanical one.

We have thus endeavored to present a succinct analysis of the contents of this monograph, especially of that portion of it which relates to the seat of strictures, and to the mode of treatment by scarification. That this plan possesses decided

advantages over those of dilatation and cauterization cannot, we think, be doubted; at all events, it is worthy of a fair trial, and those who feel an interest in the subject will do well to procure the work of Dr. Dupierris, and examine it for themselves. Meanwhile, we take pleasure in informing them that the able author is preparing a new edition, which will probably appear during the ensuing winter, enriched by additional observation and reading. Havana, where he now resides, must afford him an extensive field for the treatment of this class of affections, and we shall be happy to lay before our readers, from time to time, an account of his labors in this and other departments of surgery, to which, we believe, he is exclusively devoted. S. D. G.

Bibliographical Notices.

Art. III.—*Treatise on the Dental Art, founded on Actual Experience.*—Illustrated by two hundred and forty-one figures in Lithography, and fifty-four Wood-cuts. By F. Maury, Dentist of the Royal Polytechnic School. Translated from the French, with notes and additions, by J. B. Savier, Doctor of Dental Surgery. Philadelphia: Lea and Blanchard, 1842; p. 324.

We are neither a dentist nor the son of a dentist (and for the former at least we devoutly return thanks); nevertheless we take an interest in whatever relates to this branch of the healing art. It gives us pleasure, therefore, to notice the book named above. It is of a highly practical character, and from the value accorded to it abroad, will prove a welcome addition to the Dental literature of this country. If we were to find fault with it, we should say that it was too concise or too meagre in that part devoted to the pathology of the mouth and its appendages. But we say this with hesitation, and certainly would not insist on it. C.

Art. IV.—*A Practical Treatise on the Management and Diseases of Children.* By Richard T. Evanson, M.D., and Henry Maunsell, M.D. Second American, from the fourth Dublin edition, with notes, by D. F. Condie, M.D. Philadelphia: Barrington and Haswell, 1843.

The extraordinary success of this work is the best proof of its intrinsic merits. The patronage which it has obtained in Great Britain is greater than was ever conferred upon any

other book on the Diseases of Children; a large edition was rapidly disposed of in this country; and its translation into the German language shows how it is appreciated in the north of Europe. The present edition, from the fourth Dublin, has been enriched with notes by Dr. Condie, a learned physician of Philadelphia, who is practically conversant with whatever pertains to the subject. The most valuable additions by the editor relate to gangrene of the mouth, and cholera infantum, two topics which were very imperfectly discussed by the authors, and a knowledge of which is of paramount importance to the American practitioner. This is especially true of the latter malady, which destroys annually an immense number of children throughout the United States. Gangrene of the mouth is comparatively rare, but it is always dangerous, and generally extremely difficult to manage. It is on this account that we esteem the labors of the American editor as peculiarly valuable, and we only regret that his additions are not more extensive. As it now presents itself, the work of Dr. Evanson and Dr. Maunsell constitutes the best practical treatise on the subject in any language. It embraces a complete outline of the existing state of the science, written in a plain and perspicuous style, and is perhaps as faultless as it is possible for any production of the kind to be. The work is well got up, and reflects much credit upon the enterprising publishers. S. D. G.

Selections from American and Foreign Journals.

Observations on some Popular Remedies of German Practitioners.—By Sir George Lefevre, M.D., &c.—German therapeutics hold a middle rank of action between the French and the English, being more energetic than the former, and less so than the latter. The Germans boast of a simplicity of prescription, and have a horror of contrarieties, carrying this to a ludicrous nicety and an unmeaning orthodoxy. Thus, a solution of sulphate of magnesia in an infusion of roses, or the combination of a laxative with an astringent, meets with the severest criticism, from those who profess as much abhorrence of a *contresens* in prescriptions as nature does of a vacuum.

There is much to commendate in simplicity of prescription, and the multifarious ingredients which formerly entered into the British recipe have not undeservedly merited the stigma of *farrago* applied to the latter by continental practitioners. Dr. Paris long since pointed out the error, and has done much to rectify it. The study of pharmaceutic chemistry and the superior education of the general practitioner of modern days have almost accomplished this desideratum; still we do meet with combinations of materials which would be better for a little sifting.

Unless in form of decoctions, which contain certainly the essence of a large proportion of the vegetable kingdom, and are favorite remedies, a German prescription rarely boasts otherwise of more than two or three ingredients. Nothing is considered to be inert unless it be distilled water, and if active remedies are administered in a variety of other menstrua, the latter are not chosen indifferently, but with a specific view, and to perform a part in the operation of the whole. One carminative water cannot be substituted with impunity for another, it being granted that each has a specific action on the system. In respect to the influence of

minute doses the Germans countenance the practice of homœopathists. Their ideas (well or ill-founded as they may be) of infinitesimal doses are illustrated in the preparation of a decoction much esteemed for the cure of eruptions which disfigure female beauty, and which is administered freely in the spring. It is composed of sarsaparilla, dulcamara, tops of the pine, beet-root, buds of the beach tree, &c.; but the most active ingredient is a small piece of glass of antimony tied up in a muslin bag, and boiled for a limited time only in the decoction, which is supposed to be impregnated by it, although it may have lost no weight in the operation.

With respect to active remedies they are generally exhibited in their most simple form. Calomel is generally given in powdered sugar. Blue-pill is rarely, if ever, prescribed, and I have not met with any German practitioner practically acquainted with the hyd. c. cretâ.

When it is the object to introduce mercury by slow degrees into the system, the bichloride is always employed. I must state that I was much disappointed in the effects of our common English preparation of blue-pill in northern latitudes, and I must attribute the failure to some influence in the climate, and not to any fault in the preparation, for I imported it myself from the best London chemists, so that during the latter period of my sojourn in St. Petersburg I invariably employed the bichloride in the treatment of equivocal complaints.

In no climates do these diseases more readily yield to the influences of mercury than in those of northern latitudes, and more particularly in the winter season. The equable temperature of the apartments prevents the patients from catching cold, and the dryness of the atmosphere allows, under certain restrictions, of moderate exposure to the open air. It is positive that the cure is prolonged by external exposure, but it is equally true that the constitution on the whole suffers less than when subjected to close confinement.

I shall not at present agitate the question of the non-mercurial treatment of these complaints, which I may describe at some future period; I shall at present speak of the bichloride, placing it at the head of the list of popular German remedies, upon which I propose making a few observations.

In primary affections, where the use of mercury is indicated, the patient is put upon low diet, and but a small quantity of animal food, and that of the plainest kind, is permitted. Wine and spirituous liquors are interdicted by the generality of practitioners, but some allow of a moderate quantity of

the former, upon the principle of its preventing the debilitating effects of nausea, and mitigating diarrhœa and tormina. Coffee is looked upon as too stimulating, and all condiments in the preparation of the patient's food are prohibited. As a general position, the more simply the body is nourished the more powerfully will specific remedies act upon the disease under which it labors, and the theory, rational in itself, is supported by facts. The patient is generally purged, and advised to take a warm bath previous to the commencement of the course, and the latter is generally repeated once a week during the treatment.

The following is the usual manner of administering the bichloride. I shall quote the practice of Dr. Salomon, whose successful operation of the ligature of the common iliac has placed him high in the ranks of surgical eminence:

℞ *Hydrarg. bichlor.*, gr. iij; *solve in aquâ fontan.*, gtt. ij.
Ext. glycyrrhiz, ʒj;
Opii puri, gr. iij. Misce et distribue in pilulas xviij æquales.

The patient commences by taking one pill the first night and one the following morning. The same the second night and morning. Two pills the third night, one in the morning. The same the fourth and fifth night. The sixth night two pills, and two the following morning. Three pills on the eigth night.

The dose is never pushed beyond a grain in the twenty-four hours, and seldom more than two-thirds of a grain are given daily. If things go on on well, and the disease feels the influence of the remedy, the dose is again reduced, so that towards the end of the third week no more than the sixth of a grain is taken daily. A pint of the simple decoction of sarsaparilla is drank during the course of the day. Black-wash upon finely scraped lint is the local application, and it is rare that a cure is not effected in the course of three weeks, or after the administration of from ten to twelve grains of the bichloride. The treatment is terminated by an aperient, and two or three warm baths. Such is an outline of the practice which I have seen very generally adopted, and which latterly I employed myself, and I have met with no cases of secondary symptoms where it has been conscientiously followed by the patient.

In some constitutions, which rebel against a continued course of mercury, the hydriodate of potash is substituted for a time.

It is administered in large doses, from ten to thirty grains, three times per day. If the local condition of the part improves, and the constitutional irritation ceases, the mercury is again resorted to for the final cure. The Germans seldom combine the bichloride with the hydriodate of potash. In pseudo-syphilitic cases the treatment is confined to the administration of the latter with sarsaparilla. In decided secondary symptoms small doses of the bichloride, long continued, with the decoction.

There is a difference of opinion among German practitioners as regards the advantages or disadvantages of cutaneous perspiration during the administration of mercury. Some advise that the patient should be confined to a room heated to 60° of Fahr., and combine sarsaparilla with the bichloride, from its sudorific properties; whereas a distinguished physician in Vienna, who has acquired celebrity for the treatment of syphilis, particularly under its secondary forms, insists upon a cool surrounding atmosphere, asserting that if the pores of the skin are kept open, mercury loses half its power.

The Muriate of Ammonia.—Previous to my sojourn in Russia I had never seen this remedy employed, otherwise than in the form of lotion. I have within the last fourteen years had much experience of it as an internal medicine, and have had very convincing proofs of its efficacy, or even preference over other salts, in a variety of complaints. I have stated that the tubercular consumption is a rare disease in high northern latitudes; but pleuritic affections, subacute and congestive inflammation of the lungs and their envelopes, are very frequent maladies. These are the effects of vicissitudes of temperature on the breaking up of the winter, and go under the name of *refroidissement*, a term which implies more than our English phrase of catching cold.

In cases of serous and mucous congestion, where the inflammation does not run so high, I have seen this salt employed with the most beneficial effects. In pleuritic affections it is usual to combine tartarised antimony with it, and the following is the formula generally adopted:—

℞ *Mur. ammoniæ*, ℥j;
Antimon. tartar, gt. ij;
Decoc. glycyrrhiz, ℥viij;
Syrup. altheæ, ℥j M.

A tablespoonful of this is given every two hours, and con-

tinued in spite of the nausea and vomiting which the first dose or two may occasion.

Administered *per se*, and prescribed with the same view as nitrate of potash, I should, as far as my own experience is concerned, give it a decided preference. I would not exalt it to the dignity of a specific, nor attribute all its virtues to its deobstruent power, as most of its advocates do. It acts slightly upon the kidneys, and expectoration is often facilitated, but not always so, and cases treated by it *progress* to cure without decided critical evacuation.

In cases of congestion of the mucous membranes, in chronic sore throat, with elongated uvula and flabby state of tonsils and parts about the fauces, it is very beneficial. In that state of the mucous membrane of the stomach caused by the action of a variety of medicines which gives rise to the anorexia accompanying convalescence, I have seen it employed with happy results. The tongue loses its pallor, and acquires a healthier appearance from its use, and it paves the way advantageously for the more decided tonics in the convalescence after gastric fever.

In some forms of uterine disease accompanied by discharges it is also useful. Its salt, unpleasant taste is best disguised in a decoction of liquorice-root, or a solution of the extract in water.

The Nitrate of Soda.—The Germans consider this salt as possessing great antiphlogistic powers, and more active than the nitrate of potash; it is indicated in cases of acute inflammation of the lungs and pleura, and supersedes the muriate of ammonia, which is given in subacute and congestive inflammations. I have not the testimony of experience to warrant any preference it has over the nitrate of potass. The Germans still retain the names of natron for soda, and kali for potash. They say natron nitricum, &c.

Bitter Water.—This is a favorite remedy, and is much used in St. Petersburg; its action is mild and speedy, and when taken in tumbler doses early in the morning seldom fails to purge gently; its taste is mawkish, but much less nauseous than the solutions of Epsom or Glauber salts. Previous to a commencement of a course of mineral waters, it is customary to administer a few doses of this to prepare the way for them. Pregnant women employ this remedy with very great advantage, for it produces all the desired effects without any griping.

The Muriate of Soda, in the form of brine, in which cucumbers are preserved, is a most popular aperient. A small wa-

tery, seedy cucumber is pickled in brine, to which a very small proportion of vinegar and some leaves of aromatic plants are added. Thousands of barrels are prepared annually, and serve as salad for rich and poor during the winter. The liquor, impregnated with the rind of the cucumber and the aromatic herbs, is drank in tumbler doses, and is more popular even than the bitter water.

Aqua Lauro-cerasi.—This preparation is in much and deserved esteem in Germany. I am surprised to find it so rarely employed by London practitioners; it is highly serviceable in spasmodic affections, and is what the French style *calmant* in the most extensive signification of the term. It is prussic acid *drawn mild,* but it is considered to be more available, and, indeed, is almost used to the exclusion of it by continental practitioners. It is a safer preparation; the dose may be increased from ten to sixty drops, and a patient may be trusted with a phial of it. There is a great advantage in administering certain remedies, *per se;* by diffusing them in mixtures made palatable by syrup, &c., decompositions take place, as, for example, chlorine water, which is decomposed by sugar.

The druggists in St. Petersburg are compelled to retail all medicines which are poisonous in small doses in *dark blue bottles,* and all the labels are of the same colored paper. A piece of paper, upon which is printed "*for external use,*" is pasted upon the foot of the phials containing liniments, lotions, &c. This is a very sensible plan, and worthy of imitation.

The aqua lauro-cerasi deserves a trial. It is most useful in spasmodic affections of the stomach, in hypochondriac uneasiness, in hysteria, combined with pain about the uterus. Some mental affections from over excitement are much relieved by it, I have found it very useful in calming the pain arising from the passage of inspissated bile, and small biliary calculi. Whether all these effects are to be derived from the hydrocyanic acid, I have not sufficient experience; if they are equally certain I still prefer the aqua lauro-cerasi as a more available remedy, which may be administered, *per se.*

Phosphoric Acid.—I should say that this is given in all those cases where sulphuric and nitric acid are employed in Britain, and that Germans consider it a better tonic than the two latter. It is prescribed in its solid form in pills, but more frequently in the liquid state.

Chlorine Water.—This is a very favorite remedy in putrescent fevers, and in cases of ulcerated sore throat which as-

sume a putrid form. It is useful in gargles, and I have employed it with much success in St. Petersburg, where sore throats are very prevalent, owing to the alternations of extreme cold and moisture; I have prescribed it also in form of mixture in camphor julep, or some simple menstruum. Sugar decomposes it.

Arnica Montanum.—This has been introduced into the British Pharmacopœia since I left the country. Whether it has justified this honor by the estimation in which it is held by the profession I am unable to state. With the Germans it is classed among *sacred* remedies; its virtues are extolled throughout two pages of the "Pharmacopœia Ruthensis." I have been much disappointed in its effects as far as I have been conversant with it. It is generally used in those cases where strychnine is indicated, but is much less efficacious and more uncertain in its operation. I have seen it administered in large doses without producing any sensible effects.

Extracts.—These are very freely used by German practitioners, and the two general favorites are the ext. taraxaci, and the ext. graminis (triticum repens). The former is employed in all hepatic affections, jaundice, dropsy, &c. The latter is used as a mild tonic and deobstruent, in the convalescence from gastric fevers. Perhaps no two remedies are so frequently prescribed as the two in question; a great merit is their indigenous growth. The Russians, as far as drugs are concerned, patronise home produce; they have a prejudice against taking such as do not grow in the same quarter of the globe in which they reside, and question the influence of Asiatic products upon European constitutions, unless the European happen to be located in Asia. The domestic medicines of the people, the roots, the herbs, the simples, are also much in vogue with the higher classes, from the circumstance of their indigenous growth.

Indigo.—This remedy I have seen administered in cases of epilepsy, hysteria, and in all the convulsive affections of children, from such as are the result of teething to those which are caused by effusion on the brain. I have ever protested against the idea of its exerting any beneficial power in such cases, and have discontinued my attendance where a continuation of its use has been insisted upon to the exclusion of more active remedies. It is, nevertheless, a very popular remedy with German practitioners. The

Treatment of Erysipelas by the latter is altogether confined to antiphlogistic remedies administered internally, and to dry applications externally. The application of anything in liquid

form to the part is most severely reprobated, and a practitioner who would apply a cooling lotion to an erythematous inflammation of the leg would risk the censure of the board of medicine (the physicant). There is a great and prevailing fear amongst German physicians of repelling anything in form of eruption, and should this have taken place it seems sufficient to explain the production of any subsequent malady at any remote period. The blood once contaminated by the retrocession of an *ausschlag* (eruption), will require quarts of decoctions to purify it. I have heard of dangerous fevers attributed to the use of Gowland's lotion, as puerperal mania and swelled leg are always ascribed to the absorption of milk into the blood. The *Rose* is looked upon with a jealous eye both as to immediate and future consequences, and a patient who has once suffered from erysipelas is hardly considered out of jeopard for the rest of his life. If any means have been used to cure the complaint by local applications, then the danger is quadrupled. Metastasis from the extremities to the head is held up *in terrorem*. The treatment in incipient stages is confined to laxatives, sudorifics, and nauseating doses of antimony, and the part is dusted with starch, powder, or chalk and camphor, and the whole limb is inclosed in wadding. If the head be attacked a mask of this cotton wadding is made to envelop it, apertures being left for the eyes, mouth, and nostrils, so that the patient looks like a Spanish inquisitor; all means are employed to divert to the extremities, and the pediluvium with mustard-flour, sinapisms, and dry cupping are resorted to. No narcotics are permitted at any stage of the complaint, not even to procure sleep when all unpleasant symptoms have vanished. The powder with which the parts are dusted goes by the name of *anti-erysipelatous powder of Berlin.*

Tinct. Digitalis Æther.—This is a very useful preparation, and a convenient mode of administering the remedy. The leaves of the foxglove are macerated in ether in lieu of rectified spirit. The nauseating properties of the digitalis are counteracted by the stimulant power of the menstruum, and in cases of serous effusion, where it is desirable to increase the action of the absorbents and to determine to the kidneys, this preparation seems to combine these advantages, without the nausea and exhaustion which frequently accompanies the use of the simple tincture. From five to twenty drops is its range of dose.—*London Lancet*, April 29, 1843.

Advantages of Tapping the Brain in Hydrocephalus.—Mr. Butcher, in a late number of the "Dublin Medical Journal," advocates strongly the employment of the trocar to penetrate the lateral ventricles of the brain in certain cases of hydrocephalus; and the operation may, he considers, be performed with a successful result at a much later period than it has usually been resorted to. No doubt the serous fluid effused into the ventricles becomes at an after period absorbed, and the patient dies from the structure of the brain becoming secondarily involved; but Mr. Butcher says,—

"That ramollissement does not come on till a later period than is generally supposed, I have verified by dissection. In eight cases that I have examined of acute hydrocephalus, where the head was unusually large, and where the children were carried off by infectious diseases, not in any of those cases was there softening or ramollissement of the structure of the brain, though the lateral ventricles were enormously distended with fluid."

A case is reported illustrative of the good effects obtained by tapping. It was that of an infant, sixteen months of age, the head of which "was almost transparent, and presented in different situations patches where the ossific matter was not deposited, its place being supplied by the common integuments. The sutures were very considerably separated, being from half to three-quarters of an inch asunder. The head measured in the fronto-occipital circumference thirteen inches and a half; from ear to ear across the vertex, nine inches: round the chin and across the vertex, nine inches and three quarters.

The operation was conducted as follows:

"The integuments having been divided with a lancet, a trocar was introduced about three-quarters of an inch external to the mesial line, near the junction of the edge of the fontanelle with the margin of the parietal bone. The instrument being inclined a little inwards, in this manner it was directed into the lateral ventricle of the right side; no sooner was the stilet withdrawn than the fluid flowed out freely through the canula. The quantity drawn off amounted to eleven ounces. After the discharge of so large a quantity of fluid, the head lost its tension and globular form, and became so flaccid as to allow the remaining quantity of water to gravitate backwards, giving the head a very elongated appearance. To support the parts a double-headed roller was applied loosely, the edge of the incision being previously brought together with adhesive

plaster. The child sunk very low immediately after the operation; however, after some time, the urgent symptoms were suppressed. From this period up to four weeks after, every thing was doing remarkably well; the head filled again, but not to one-half of its original size. The operation was again performed on the left side, in the same situation as on the right. The child began visibly to improve; no convulsions whatever occurred after the first operation; four weeks more elapsed, and the head was not near the size it presented before the second operation; so much was it lessened that another operation was deferred for a future period."

Though the result was so eminently successful, it is lamentable to think that the patient should afterwards have succumbed through ill-treatment.

"Ten weeks had elapsed; the child was free from convulsions; the eyes were quite sensible to light, and the little patient did not exhibit any lethergetic symptoms. In four days after he began to get uneasy and restless; three more had not passed by when he was seized with convulsions that terminated in death. I was immediately called to see the child, and having accused the mother of neglecting it in some way she acknowledged to have given it wine regularly for five days before, stating, as her reason for doing so, 'She thought it would hasten the cure, and not do him any harm; he was so much better.' "—*London Lancet*, April 29, 1843.

Delirium Tremens Treated by Ammonia.—Dr. Scharn, of Katscher, considers the affection in the light of intoxication at its maximum of intensity, and acting on the faith that ammonia is the most suitable remedy against the effects of ardent spirits, he has recourse to the succinate of that base on the access of the delirium; and he states that he has witnessed the most aggravated cases of the latter succumb to this remedy in a few days.—*Casper's Wochenschrift.—London Lancet.*

Advantages of Cultivating Medical Physiognomy.—The advantages of an acute exercise of the perceptive powers, although strikingly exemplified in the practice of many eminent men, have, in general, been little inculcated by medical writers and teachers. We hear, indeed of the *tactus eruditus*, and the use of the ear in auscultation is now universally admitted as an important aid to diagnosis; the *decubitus*, also.

and a few other points relating to attitude, are commented upon by medical writers. But there is a peculiar learning belonging to the *eye* and *ear* which claims the most careful attention, although hitherto but little appreciated. It is well known how skilfully some men can "find the mind's construction in the face," and detect a latent meaning in the simplest gesture or the slightest variety of intonation. This constitutes *physiognomy*, in the widest sense of the term, and every observant person must know that physiognomy has a foundation in nature, though Lavater and others did not succeed in reducing it to a science. But has *disease* no physiognomy? Do morbid actions imprint on the countenance no marks, and communicate to the voice, gesture, and manner, no peculiarities by which the practised eye and ear may detect the presence of those morbid actions, and trace their changes and transitions? Assuredly disease *has* a physiognomy, and happy is the practitioner who is gifted with the power of discerning those minute shades of expression which are inappreciable to obtuse senses; for in this very power resides a great part of that almost magical precision in diagnosis and prognosis by which some individuals have been so remarkably distinguished. The reality of medical physiognomy cannot be better illustrated than by a very common example,—that of an affectionate mother watching her sick child, in which case, excited feelings and fixed attention give an acuteness to the perceptions that more than supplies the place of scientific culture. How often do we hear a mother, so circumstanced, declare that her child is better or worse, although we can, at the time, perceive no change in the symptoms? Yet the mother is almost invariably correct in her prognosis, and a change in the symptoms speedily follows.

The study of medical physiognomy is, for several reasons, one of extreme difficulty. First, because the greater part of mankind are probably not endowed by nature with æsthetic powers susceptible of the requisite degree of cultivation; secondly, because the finest senses are liable, perhaps the most liable, to be led astray by fancy; and as the most skilful microscopical observers occasionally see that which is invisible, and the most skilful stethoscopists full often hear that which is inaudible, so the most acute medical physiognomist is apt to be misled by the like *ignes fatui* of the fancy, and the study is one in which a very strict guard should be kept upon that treacherous faculty; thirdly, because if an individual attain a high degree of skill in medical physiognomy, that skill is, in a very small degree, communicable to others—the

delicate though vivid impressions, of which his own highly cultivated senses render him susceptible, being, for the most part, incapable of explanation in language. Hence knowledge on such a subject can never become cumulative to a great extent, and each individual has little to draw upon excepting his own powers of original observation. The general outlines of the subject, however, admit of being traced in a manner intelligible to all, and it is much to be regretted that the physiognomy of disease is not generally recognised and taught as part of the study of practical medicine. Here, as in many other instances, the penetrating mind and vast genius of Hippocrates have anticipated a more advanced era of medicine than we have even yet arrived at. His celebrated description of the countenance of approaching death is familiarly known; throughout his writings we find evidences that his external senses were constantly vigilant to aid his diagnosis and prognosis, and a greater number of physiognomical observations on diseases are to be found in his works than those of any succeeding author; although it should be remarked of the ancient Greek physicians generally, that they cultivated the æsthetic powers with reference to medicine much more diligently than the moderns, and semeiology was consequently in a more advanced state among them, proportionally to the other branches of medical science.—*London Lancet, April* 1, 1843.

Strangulated Hernia Treated by Exhaustion through the Elastic Tube.—By C. S. Webber, Esq., Orford.—Mr. Webber of Orford, relates a case where he succeeded in the way recommended by Mr. Maunder; that he endeavored to produce a vacuum below the stricture by the exhausting power of the syringe. The tumor, which occupied the scrotum, was of the size of a goose's egg, remarkably tense and unyielding, with all the syptoms of strangulation. The taxis was diligently and carefully applied for about twenty minutes without success; the patient was then bled to syncope, and the taxis again had recourse to, followed by the application of cold to the tumor, and such other remedies as circumstances permitted. Before having recourse to an operation, Mr. Webber resolved to try Mr. Maunder's plan, which he did as follows:

A common enema having been previously administered, I introduced the œsophagus tube of Weiss's stomach-pump

with tolerable facility, until it arrived (as nearly as I could judge) at the sigmoid flexure of the colon, where it encountered some degree of resistance, which yielded, however, in a short time, to moderate pressure, after the injection of a little cold water. The tube was now passed gradually up until its whole length, about twenty-five inches, had been introduced, the brass extremity alone remaining without.

After waiting a quarter of an hour, between two and three pints of water were thrown up and retained in the bowel for a short period; the cylinder of the pump having been unscrewed from the elastic tube, and the mouth of the latter closed by the thumb, on withdrawing which the fluid repassed in a jet of considerable force. The cylinder was now readjusted to the tube, and the action of the machine being reversed, the piston was worked rapidly with the view of producing a degree af exhaustion or partial vacuum in the intestine; gentle taxis was at the same time resumed, and after the expiration of four or five minutes (during the latter part of which the patient complained of a sensation of bearing down referred to the whole abdominal region), I had the satisfaction to feel the contents of the tumor recede from beneath my fingers, and slip into the abdomen with the usual gurgling which accompanies the return of intestine.

The man recovered without an untoward symptom, and was removed to his father's house at Wickham, a distance of about nine miles, on the third day afterwards.

I am disposed to attribute the successful result of the foregoing case, in a principal degree, to the production of a partial vacuum in the intestine immediately below the seat of strangulation, by the exhausting process, that being the direct agent to which the obstruction appears to have yielded; and I am induced to recommend a trial of this measuse to the profession as an adjuvant to that valuable instrument, the elastic tube, in cases where the latter alone may prove inefficient.

I have since reperused Dr. O'Beirn's excellent work on Defæcation, with the view of ascertaining whether exhaustion through the tube had been adopted in any of his cases. I cannot discover that the doctor has availed himself of this expedient, although a case of constipation is cited by him in which Dr. Duguid, of Kirkwall, in Scotland, introduced an elastic tube into the colon with the effect of discharging an accumulation of fæces; and I observe that this gentleman attempted to exhaust with the view of overcoming the resistance he experienced to the passage of the tube at the sigmoid flexure, but unsuccessfully, which circumstance induced

him to undervalue the measure. There is, however, another case which seems to have suggested to Dr. Duguid the use of the tube, and which is reported in the Medical and Physical Journal, for December, 1827, being communicated by Dr. James Johnson, as having occurred in February, 1826, in the practice of Dr. Alexander, of Genoa, who appears to have employed exhaustion through a hollow bougie, after twelve days of constipation, and the failure of tobacca enemata and various other remedies, with complete success. This case, which is a very interesting one, seems to have excited but little attention.

I cannot conclude without expressing my conviction (in nearly the words of Dr. O'Beirne, who uses them, however, with reference to the tube only), that no surgeon is justified in proceeding to the operation for strangulated intestinal hernia, without having previously given a fair trial to the measures above alluded to.—*Braithwaite's Retrospect, Part the Sixth*, from *London Lancet*, May 28, 1842.

Effusion into the Brain.—By James George Davey, M.D. In the spring of 1840, being then in private practice in the suburbs of London, I was hastily summoned to Johnson-street, Somerstown, to the assistance of a child, about eighteen or twenty months old, who, I was told, had been suddenly seized with a "fit." It was lying in its mother's lap, apparently dying. The surface of the body was cold, and covered with a clammy perspiration, and the countenance injected and livid; the pupils were dilated, the eyes fixed, and the eyelids partially closed; the mouth contained a quantity of frothy saliva; the respiration was hurried and oppressed; and the pulse rapid and feeble. The parents of the child, and two or three other persons who were present on my arrival, felt so assured of its immediate death, that I was requested not to interfere in any way. I had much difficulty to induce the parents to forego their resolution. Having only two or three days previously lost a child under very similar circumstances, at Camden-town, I became immediately resolved on a different kind of treatment to that I had then adopted; that is, I chose to open a branch of the temporal artery rather than wait the issue of a modified procedure. I abstracted very little short of a wineglassful of blood, and then, having desired the father to press the bleeding orifice with the point of his finger, I quickly administered, by means of a teaspoon in-

serted into the pharynx, a little brandy and water. The excellent effects of the treatment became immediately apparent. I was no less surprised than those about me. The surface of the body became warm, the respiration natural, and the pulse normal. My little patient was presently conscious, though much disposed to sleep. I called after four or five hours and found the child very comfortable and perfectly rational. I directed a purgative to be given. The next morning it was brought to my residence in Clarendon-square, perfectly well.

The above case, I consider highly interesting. I make no doubt that the more general practice of leeches in cases of the kind may be, in many cases, very properly substituted by general bleeding. If children are but men in miniature, wherefore should we not treat them as such? Moralists do so, and why not doctors?—*London Lancet*, April 22, 1843.

Liquor Taraxaci.—A very elegant preparation has been introduced under the above title, and which, from the strong taste it possesses of the recent root, has been much used by medical men who have confidence in the remedial power of dandelion. The following formula has been communicated to us:

Dandelion roots, perfectly clean, *dried*, and sliced, 18 ounces.
Infuse for 24 hours in a sufficient quantity of cold distilled water to cover them.

Press and set aside, that the feculæ may subside; decant and heat the clear liquor to 180° F., so as to coagulate the albumen; filter the liquid while hot, and evaporate in a drying room, or by means of a current of warm air (a water or steam bath will not succeed so well), until the product shall weigh 14 ounces. To this must be added 4 ounces of rectified spirit. Should the roots not have been perfectly cleansed, the product must be digested with pure animal charcoal. If properly prepared, *Liquor Taraxaci* resembles in color pale sherry, and possesses the acrid taste of the fresh root in an eminent degree. The dose is from one to three fluid drachms. —*Braithwaite's Retrospect*, from *Medical Gazette*, Nov. 4, 1842.

Assafœtida in Hooping Cough.—Dr. Reiken has derived more advantage from the use of assafœtida than from any

other remedy in three epidemics of hooping-cough. It is indicated only after the febrile period has passed, and its influence is diminished in the third stage, when tonics should be combined with it. As assafœtida is a medicine which it would be very difficult to induce children to take by the mouth, Dr. Rieken prescribes it in enemas—he orders three grains of the gum resin to be rubbed up with a sufficient quantity of yolk of egg, and mixed with 125 to 250 scruples of water: This mixture will suffice for ten or twelve lavements for children under a year old; for from four to six, for children three years old; and for two or three only, for those that are older. For the first five or six days, two enemata are given daily, sometimes more; after that, one at night will be sufficient. If diarrhœa should come on, it may be stopped by increasing the quantity of the yolk, and by adding starch or gum arabic; olive oil should be added if tenesmus should supervene. The use of the assafœtida is very well borne by children of a strong constitution, and still better by those that are nervous or lymphatic.—*Annales de la Soc. Med. de Bruxelles*, from *Provincial Medical and Surgical Journal*, May 7, 1842.

THE WESTERN JOURNAL.

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LOUISVILLE, JULY 1, 1843.

TRAVELLING EDITORIALS.

Artificial Fountains.

The most fertile part of South-Alabama, is destitute of permanent springs. This is especially true of the counties of Greene, Marengo, and Sumpter, with those of Lowndes, Noxubee, and Kemper in the adjoining parts of Mississippi. These counties lie on the opposite sides of the Tombeckbee and Tuscaloosa rivers, and embrace most of what is called the prairie and canebrake country—botanically different, but geologically almost identical. The soil is highly calcarious, and abundantly supplied with black mould. The substratum is, indeed, the disintegrated outcropping of a thick formation of marlite, which dips to the south. The deficiency of water within this fertile district was so great as to retard its settlement; but the Artesian auger has at length supplied the desideratum. A great many plantations have permanent wells, and the number is annually increasing. They vary in depth from one hundred and forty to more than five hundred feet. In general they are about three hundred. In a few of these borings, the water does not rise to the surface, but

is conducted into a well dug by the side of the aperture. In the majority, however, it flows out, *pleno rivo*, and displays no variation in quantity or quality throughout the year. In making a voyage down the Tombeckbee (on whose narrow and winding way, overshadowed by lofty forests garnished with long moss, we are writing this paragraph), one discovers the geological mechanism on which these fountains depend. At Demopolis a grey, soft, almost cretaceous limestone, reaches from the surface of the plain on which the town is built, to the waters edge, and by the seams which its perpendicular face presents, the observer discovers, at a glance, that it dips to the south. At the distance of fifteen or twenty miles, the whole has disappeared beneath the river, and a different formation taken its place, to be succeded by others. Thus the dip of this tertiary formation is to the south, and the highlands, where the water-retaining strata crop out, are in the region where the Tombeckbee and Tuscaloosa have their origin. These facts explain why very deep borings, even eight and nine hundred feet, in the *southern* part of the district, have failed to bring up water. They encountered the soft limestone or marlite too far from its out-cropping—too remote from the highlands.

The water of all the Artesian-wells is substantially the same. It has a faint sulphurous taste and smell, almost absent in a few; and is so hard as to become white on the addition of acetate of lead. Still it is soft compared with the shallow wells, called *seaps* which are supplied by percolation from near the surface. We found the depth and temperature of eight of these fountains, in Greene county, to be as follows:

No. 1, 112 feet, 66 of Fahr.
" 2, 255 " 68 "
" 3, 260 " 69 "
" 4, 290 " 67.5 "
" 5, 300 " 69 "
" 6, 307 " 69 "
" 7, 312 " 67.5 "
" 8, 320 " 67 "

To what shall we ascribe the difference of temperature of these fountains, when their depth is nearly the same? especially, how are we to account for number eight, with a depth of three hundred and twenty feet, being 2° colder than number three, the depth of which

is only two hundred and sixty feet, or sixty feet less? This difference, according to observations on the temperature of the earth at different depths, should have made it a degree and a half colder than the other. It may be, that after the boring of a well has been finished, water of a higher level bursts in, and thus gives a temperature different from that of its bottom. It may be, also, that the water in reaching some of the wells, may have ascended from greater depths. Finally, some variety in the mineral character of the rocks below may exist, and produce a difference of temperature.

But to waive all speculation, we may say, that the temperature of these fountains affords additional evidence that the heat of the earth increases as we descend. For, first, their temperature is above the mean heat of the climate in this latitude; second, the shallowest of the whole is the coldest; third, we found the heat of a well eighty feet deep to be 63° and of a spring 62°, both in the same latitude with the wells.

How far do the facts afforded by the Artesian fountains sustain the conclusion from observations made elsewhere, that as we descend into the earth the heat increases at the rate of one degree for every forty-five feet? Let us see.

The average depth of the four deepest borings is three hundred and nine feet. If we deduct from this sum eighty-four feet, for the range of variable summer and winter temperature, we have a remainder of two hundred and twenty-five, or five times forty-five, which should give 5° degrees of increased heat. Let us take the difference between 62° and 63°, or 62.°5, as the heat at the point of constant annual temperature, and add to it five degrees, and we have 67.°5, as the temperature which the water issuing from the depth of three hundred and nine ought to possess, which is within six-tenths of a degree of the average heat of the four deepest wells. We may say, then, that the Artesian borings of Alabama give additional evidence, that as we descend into the earth its temperature increases at about the ratio of a degree for every forty-five feet.

Let us in conclusion say a word on the value of this discovery to people of the Artesian district. 1st. Although the water is warm and somewhat sulphurous, it is so much superior to what the operatives on the cotton plantations drank before, that a state of improved health has been already observed on some of them. 2d. An abundant supply of stock water has been obtained. 3d. Water for any

degree of irrigation can be had in abundance, of a temperature well suited to that object. 4th. By boring with larger augers, and uniting the streams from several apertures, each farm may have a permanent water power, for grinding, sawing, working the cotton gin, the press, and all other purposes. Thus, science is more than supplying a natural deficiency; and entitling herself to the gratitude of a new community, who are far from cherishing for her any overweening admiration.

Contact of Primitive and Tertiary Rocks.

At Wetumpka, foot of the rapids of the Coosa river, the tertiary formations rest directly on strata of mica-slate which dip to the N. N. W. at an estimated angle of 45°. The upheaving of this primitive formation has perhaps raised the tertiary, and given them the southern inclination of which we have spoken in the preceding article. The disintegration of this slate has liberated an immense quantity of mica, which sparkles in the adjoining soil, and issues with the water of its springs, which deposit it on standing. Some of the medical gentlemen of Wetumpka attribute to this micaceous impregnation of the water, a chronic diarrhœa, which prevails at that place much more than in other parts of the State.

Legalized Quackery.

Alabama has long had a law denying to those who practise medicine without a diploma or a license, the benefit of her courts in the collection of their debts. We do not suppose it has done any more good in this than in other states; but still it served as a theoretical expression in favor of science. Lately, however, it has been so modified as not to interfere with "any persons" who practise on the "botanical system of *doctor* S. Thompson;" provided, nevertheless, that they "do not bleed, apply a blister of Spanish flies, administer calomel or any of the mercurial preparations, antimony, arsenic, tartar-emetic, opium, or laudanum!" It would be difficult to say whether *doctor* Thompson's patent, or this law, is the more precious specimen of empyricism. It is marvellous, that a people so enlightened as those of Alabama, should allow their statute book to be made ridiculous by such nonsense.

Mesmerism.

Alabama is not more thoroughly overrun with the disciples of *doc-*

tor Thompson, than those of Dr. Mesmer. Anxious to have the phenomena of Mesmerism subjected to a rigid examination, the true separated from the false, and the public mind kept in a healthy condition in reference to both, we cannot but regret to see one travelling mountebank after another, traversing the south-west, for the purpose of extracting money from those who are credulous enough to believe, that *he* can do any thing in which men of sense will confide. It is truly unfortunate for Mesmerism that it should have fallen into such hands. Things are coming to that kind of pass, that we shall soon not be able to distinguish the pass of an impostor from the pass of a scientific Mesmerizer, and, in discouragement, pass the whole by; not even making it a pastime of a passable kind, as it was in days past; and when this happens, there is great danger that it will be passed over, and fall into a somnambulic state, from which the passes of the most scientific hand may not awaken it, till the remembrance of what is now doing to degrade it has past away.

Small amount of operative Surgery in the South-West.

Our brethren of Alabama and eastern Mississippi, represent that the number of surgical cases in their practice is very small, and we incline to the same conclusion. There are, according to the best observations we have been able to make, fewer cases of calculus, and diseases of the eye requiring surgical treatment, than in the west; and there may, for aught we know, be other differences in favor of the south-west. The chief reason, however, for the rarity of surgical cases is to be found in the pursuits of the people. In the miscellaneous agriculture of the west and its mechanical operations, accidents requiring the aid of the surgeon, are far more frequent than they can ever be in cotton fields; where none of a serious kind are likely to occur. When, however, injuries are inflicted in this country, death by tetanus follows, far oftener than in higher latitudes, and this is true not only of the black, but of the white population.

Old Doctors.

In the north and west every village has its old doctor—generally quite a respectable personage, with several peculiarities, and the self-complacency which comes from a life of usefulness, winding up amidst the regard of the neighborhood, and the respect of the younger physicians, who surround him. A sage of this kind is almost unknown in the south-west, except by title, which often indicates

about as much clinical labor, as that of colonel testifies to military achievement. The reason of this difference between the south-west and the more northern portions of the Union, is three fold: 1st. A great many physicians die young; 2d. A number go to cotton planting; 3d. Not a few marry rich widows. Thus it is that causes the most opposite conspire to deprive this quarter of the benefits of ripe medical experience. How long the first will continue with its past energy, we cannot predict; but the second will soon cease unless the price of cotton should rise above five cents a pound; the last, however, is of a permanent character, for six or eight times as many husbands as wives die in this region. We shall expect the thanks of at least two classes of persons for this information.

Departure and Acknowledgments.

In leaving the country watered by the Alabama, Coosa, Tallapoosa, Tuscaloosa, Tombeckbee, and other beautiful rivers, which in their confluence make up the Mobile, we may be permitted to say, that in forty days of active travel, we have every where met with the greatest hospitality; that our brethren have liberally and candidly poured out their experience; while the planters whom we have visited, have communicated many valuable facts. We have met with neither robbery nor insult; nor more than a dozen drunken men; nor one Bowie knife; nor seen a fist fight; nor heard six physicians backbite their brethren; nor encountered a drunken doctor—*nunc rara avis.* On the contrary we have been among a temperate, quiet and religious people, whose unvaried and unostentatious kindness demands from us this acknowledgment. D.

Tombeckbee River, June, 1843.

MEDICAL SOCIETY OF TENNESSEE.

The meeting of this Society was held at Nashville on the first Monday in May, as usual, and was attended by about the usual number of members. The cases reported were generally interesting, and a number of them will be published in our Journal. Dr. Richardson, of Rutherford county, delivered a sensible, practical address, as orator for the occasion. The Society resolved on founding a Cabinet

of Pathological Anatomy, in Nashville, and solicit specimens of the healthy as well as of morbid structure from all its members, and from physicians generally. Y.

MEDICAL SOCIETY OF NASHVILLE.

The physicians of Nashville have commenced a spirited organization under the above title, for the cultivation of medical science and the improvement of its members, as well as the establishment of a code of professional ethics. The Society has held several meetings, elected officers, and made altogether an auspicious beginning. Nearly all the physicians of Nashville are members. The officers of the Society are Boyd McNairy, M.D., President; G. W. Dickinson, M.D., Vice President; A. H. Buchanan, M.D., Corresponding Secretary; R. C. K. Martin, M.D., Recording Secretary; and C. K. Winston, M.D., Treasurer. The officers are elected for one year.

The discussions that have taken place at the meetings of the Society displayed a zeal in the cause of medical learning, and a spirit of research highly creditable to the members, and which augurs well for its good influence upon the profession. We hope this association will lead to the formation of similar societies in all the towns of the State. *E collisione scintilla*, is a proposition as true of mind as of the flint and steel. It is professional intercourse that we want—the collision of mind with mind—the comparing of experience and observation—the excitement and the ardor which are enkindled by the meeting of generous spirits engaged in the same high pursuits. The benefit that would flow from such associations continued for a generation, and conducted with liberality and spirit, is incalculable. We have only to look abroad to Paris, London, Dublin, Edinburgh, and to Philadelphia, and New York, in our own country, to see the benign effects of large professional intercourse, and generous professional rivalry. These associations are the nuclei around which scientific discoveries are collected—the foci of intellect, imparting an influence that extends over the world. Y.

NEW YORK JOURNAL OF MEDICINE AND THE COLLATERAL SCIENCES.

We heard of this new Journal sometime since, but it is only very recently that we have seen the prospectus. It is to be under the editorial management of Dr. Samuel Forry, than whom no man in this country has a more growing reputation; the Journal could not be entrusted to better or more competent hands. It will appear every two months—which, we are inclined to think, is a happy medium between the monthly and quarterly. Messrs. J. & H. Langley are the proprietors.

New York formerly possessed one of the best medical periodicals ever published in the country—the New York Medical Repository; and to us, at this distance, no city in the Union would seem to offer more advantages for the new enterprise. We do not forget, whilst saying this, that there have been three unsuccessful attempts to sustain a medical periodical there, within the last few years. Dr. Swett's Journal (a very excellent one by the way) was suffered to go down; the Gazette, which succeeded it, shared the same fate; and the Lancet, which was the last, fairly run itself down. We hope a better fortune will await the new Journal. C.

LECTURES ON VISCERAL AND SURGICAL ANATOMY, AND OPERATIVE SURGERY.

Professors Cobb and Gross will commence their fall course of lectures, on the above subjects, on the fifteenth of September, and continue them until the last Saturday in October. We would respectfully urge upon students of medicine the propriety of attending these lectures. They are upon topics, which are (whether right or wrong) almost wholly omitted in the usual winter course, and yet a knowledge of them is absolutely indispensable to a successful and honorable career as a practitioner. C.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

AUGUST, 1843.

ART. I.—*Case of Cancer.*—Reported to the Medical Society of Tennessee, May, 1843. By A. H. BUCHANAN, M.D., of Nashville, Tennessee.

Thomas Terrell (of Columbia, Tennessee), aged forty-nine, a man of more than ordinary intelligence, of good form, and apparently of sound constitution, gives the following history of his case.

"When I was a boy between twelve and thirteen years of age, I discovered a small tumor about the size and feel of a large squirrel shot, situated under the skin at the root of the nose, just where it joins the forehead and midway between the eyes. The tumor remained stationary, without any pain, until I was about twenty years of age. In the course of the next five years it increased to the size of a

common rifle ball without pain, and in 1821, it was extirpated by Dr. McConnell, of Lancaster, Kentucky. The wound immediately healed, but the tumor soon returned and increased with greater rapidity than it had done at any previous time, and on the 23d day of December, 1823, it had attained to the size of a small almond, and burst open the cicatrice of the old wound. The tumor was now removed by Dr. Smith, President of New-Haven College, and resembled in appearance a large black-berry. The wound again healed in ten or twelve days; but the tumour returned in a short time and increased until the fall of 1824, when it was again removed by Dr. Kincade, of Shelbyville, Tennessee. The tumor, when operated on by Dr. Kincade, was rather less than before the previous operation, but was situated nearer to the internal angle of the left eye. The incisions again healed, but in the spring of 1825, the same surgeon found it necessary to repeat the operation, and removed the tumour which had returned, together with some hard callous growth in its neighborhood. During all this time the tumour excited no pain. The wound as heretofore healed readily, but the tumour returned and gradually increased until the winter of 1826, when I was seized with a violent attack of influenza, so that my life was despaired of by my physicians. But I recovered gradually from this attack, and found that it had a salutary effect upon the tumour, which almost entirely disappeared for seven or eight months, during which time my health was quite delicate. In 1827, I moved to St. Charles in Missouri, and the tumour again commenced increasing rapidly. Dr. Stodder was now consulted and he pronounced the disease to be cancerous, and advised me not to submit to any further operations. He applied *potash of red-oak bark, and drew out the plug with a plaster of tar*, which arrested the progress of the tumour, and the part assumed nearly a healthy appearance for about five years.

In 1831 I was married; I have one child, now about eight years of age, who has no signs of the disease.

In 1832 my disease again commenced increasing, and several small hard lumps or knots appeared under the old cica-

trice. In the spring of 1833 it was burnt with *wet fire* and never afterwards healed, but gradually spread and increased in size; the ulcerated parts were frequently filled with calomel which had rather a bad effect. In the fall of 1839 Professor Dudley, of Lexington, was consulted; he gave me no satisfactory advice, but declined operating, and stated that operations would injure me. I returned home and the tumour has gradually increased to this date, November 1841; as you see, it is now the size of a child's head of a year old, and hollowed out in its centre; about two years ago the tumour was not larger than a small apple."

Having taken down with my pencil the above history, given by Mr. Terrell himself, I now examined the tumour, which was one of the most frightful I ever beheld; he really looked as if he had two heads, and the weight of the tumour was so great that when he sat up, it drew the head forwards. The centre of the tumour was excavated and was very deep, so that the bones of the nose were entirely destroyed; and also the external lamina of the os frontis had ulcerated through at several points, the pits being large enough to receive the point of the finger. All the surface of the cavity, was covered with a very offensive secretion, more resembling a yellowish cream than any thing else. The surface was also very irregular and knotty, and when this secretion was removed by washing, or fell off spontaneously, which it frequently did, the surface looked perfectly clean and of a pinkish color, with several pits upon it, and with numerous blood-vessels, both arteries and veins, creeping over it; some of the arteries could be seen distinctly pulsating. In a few days after the removal of the above secretion, it was again renewed, and remained firmly attached for ten or twelve days, or longer, when it would again come off, deepening and widening at each time the internal cavity. This process of ulceration opened one or more blood vessels for the first time in the month of May, 1841, from which a profuse hemorrhage occurred; and from that time at different intervals of two or three

weeks or longer, hemorrhages occurred of greater or less severity.

The external surface of the tumour was very irregular and knotty, though smooth and shining. The tumour was also firm and elastic, and had upon its surface numerous large and tortuous veins creeping over it, which were filled with a very dark blood, while the blood in the arteries, which were also numerous, was very florid, so that they were readily distinguished from the veins. But the shining surface of the tumour through which these vessels were so distinctly traced would sometimes become incrusted with a dark colored scurf, which would remain for a few days and drop off, leaving the surface as bright as before. The tumour, or rather tumours, occupied each side of the nose, and were in fact the superior eyelids enormously distended and infiltrated, being very firm and hard, and each one as large at least as the fist, extending down over the eye-balls so as completely to obstruct the vision. These tumours met above on the os frontis and there projected forwards so that there were three raw edges, one above, and one on each side of the nose; these edges turned out, and, in dressing the cavity, frequently bled profusely. Sometimes the bleeding could be anticipated with a great deal of certainty from the progressive ulceration of the raw edge towards the blood-vessels in its neighborhood. Terrell also mentioned that he could tell with much certainty when a hemorrhage was about to occur, as the tumour always felt heavy and full and somewhat painful previous to an attack, and that invariably he was troubled with an erection of the virile member and an emission of semen, ten or twenty hours before the rupture of a blood-vessel. I also noticed a very evident difference at times in the fulness of the blood-vessels upon the tumour, sometimes they were enormously distended and at others quite flaccid. In the course of the fall Terrell had at times suffered severely from pain in the eyes, produced most probably by the pressure of the distended lids; he also complained of a weight and uneasiness in the

front part of the head. But at no time did he complain of the peculiar lancinating and darting pains which are said to be evidences of cancer. His general health was not much impaired, and he indulged in the use of a moderate amount of food, though his skin was excessively pale and almost transparent from the frequent loss of blood. Such then was the condition of Terrell when I made the above notes, and when I thought he would not live many weeks, but he lingered on for twelve months longer, suffering greatly at times from the loss of blood, either from the internal surface of the tumour or from its raw edges. The cavity of the tumour was generally filled with cotton which was also stuck over the raw edges, and when removed, which was done every day, it was filled with the creamy matter above alluded to, and was horribly offensive. The edges of the tumour always bled more or less at each dressing, being perfectly raw and everted for half an inch or more on the lateral margins of the tumour, while the edge above turned under towards the cavity. Sometimes after a hemorrhage of some severity pearly looking drops were suspended from the most dependent edges of the tumour.

In the course of the ensuing summer of 1842, I was requested to see him in consequence of numerous maggots that were found in the ulcerated cavity; they were very large and in spite of the stimulating injections used to displace them, they revelled for several days in the deep fissures of the cavity, in the frontal sinuses, and in the spongy bones of the nose. During their stay the creamy matter accumulated in great quantities, and the stench emitted by it was intolerable. In the course of ten or twelve days they all or nearly all came away with the matter, which left the cavity perfectly clean and shining, and of a light pink color. The depth and size of the pits could now be seen very distinctly, and also numerous small arteries were visible, and could be noticed pulsating with ordinary force and regularity; one artery was as large as a crow-quill and appeared perfectly denuded. At this time while the cavity was clean there was but little odor

from the tumour. Thus he continued, sometimes better and sometimes worse, throughout the summer and fall, but always looked as if he was upon the verge of the grave, and as if it was impossible to survive another attack of hemorrhage, yet they returned even to fainting, and still he would revive, while his bloodless surface looked almost transparent. Towards the close of the summer he became dropsical, and in the month of December, 1842, he expired.

Previously to his death he gave me permission to make a post-mortem examination of his body, and to preserve so much of his head as would be necessary to illustrate the disease.

Six hours after his death, in presence of most of the physicians of Columbia, I proceeded to make an examination. We first opened the chest and found the tissues within remarkably white and bloodless; there were slight adhesions between the pleura costalis and pulmonalis by ligamentous bands of old formation, but there were no signs of recent inflammation, and the lungs were remarkably sound; not a tubercle nor other evidence of disease was met with in their substance. The heart was rather smaller than common and was firmly contracted; the cavity of the pericardium was obliterated by a firm adhesion to the surface of the heart; the large blood-vessels issuing from the heart were all sound, except the aorta, which had upon its internal surface a deposit of osseous matter, about the size of the finger nail, just beyond the orifice of the right coronary artery; around the orifice of the left coronary artery there was also the commencement of osseous transformation. Around the ostium venosum, between the left auricle and ventricle at the fixed margin of the mitral valve, there was also a ring of osseous matter about two lines wide; the lining membrane of the aorta for an inch or more beyond the semilunar valves, was elevated into little pimples which appeared to be the commencement of ossific degeneration. The lymphatic glands under the sternum were healthy, but the black bronchial glands were much indurated. The mucous membrane of the trachea and bronchial tubes

was sound. In our manipulations with the knife in the chest several veins were opened, from which flowed a very thin and florid blood which formed a firm coagulum; the medical gentlemen present, were requested to notice this fact as one worthy of record in a medico-legal point of view. We now opened the cavity of the abdomen, and, as in the chest, found the tissues very pale and bloodless; the peritoneum appeared healthy, and no adhesions existed between the surfaces of the intestines; the cavity of the peritoneum contained several pints of serum. The colon was very much contracted, not being more than an inch in diameter, the small intestines appeared of a natural size. The stomach was enormously distended and contained about four pints of water mixed with buttermilk; its internal surface was pale and had firmly attached to it a thick ropy mucus; the internal surface of the small intestines was free from disease. The liver was rather smaller, firmer and of a paler color than natural; the spleen of ordinary size and soft. The kidneys and bladder appeared to be sound. The contents of the cranium were subsequently examined: the cerebrum, cerebellum, and medulla oblongata, were sound in all their parts, as also their surrounding membranes, except that portion of the dura-mater opposite to the perforations in the os frontis, which at these points was converted into scirrhous tumors some of which projected through the openings in the bone. The anterior lobes of cerebum immediately behind these lumps were altered in their structure, and seemed to be absorbed from the pressure of two indurated lumps which projected in upon them from the internal surface of the dura-mater; these lumps were about the size of a pigeon's egg and attached to the substance of the anterior lobes. The anterior part of the ethmoid bone, the nasal bones, and the nasal processes of the superior maxillary bones, were all destroyed. The eye balls were hid beneath the anterior inferior surface of the projecting tumours, but by raising up these tumours the sclerotica in both eyes appeared to be sound, as did also the iris. I have brought to the

society the preparation of the head and heart, which they can examine for themselves.

I will not detain the society by an examination of the question, whether cancer is a disease of constitutional or of local origin, although it is one of the utmost importance to be decided. From all I have seen written on this subject, however, I am disposed to adopt the opinion that it is a disease which in a large majority of instances, particularly in its early stages, may be effectually and permanently removed by the knife.

ART. II.—*Cases in Surgery.*—Reported to the Medical Society of Tennessee. By JOHN M. ESSELMAN, M.D., of Nashville, Tennessee.

CASE I.—*Complete Extirpation of the Uterus by Ligature, after Chronic Inversion of the Organ.*—On the 1st of September, 1834, I was requested by Mr. Moore, of this city, to visit his wife, a very intelligent lady, about thirty-two years of age. On arriving at his house, I learned the history of her case from herself and husband to be as follows: They had been married for fourteen years, and their only child, a daughter, was then about twelve years of age; Mrs. M. had been in bad health ever since the birth of their child. They resided in the county of Williamson at the time of her confinement, and not being near a physician she was attended by an old lady of the neighborhood, who was in the habit of officiating as midwife. She informed me that her delivery was a very protracted and painful one, even beyond that which is usual in giving birth to the first child. I questioned her particularly respecting the delivery of the placenta, or after birth; in answer, she recollected that the old lady had given her a great deal of pain, and that she had flooded profusely, and was very faint at the time; that

she was very ill for several weeks after her confinement, and was attended by a physician from Franklin, whose name I do not recollect; and that after she was able to leave her bed and walk about the house, she was much annoyed by "*bearing down pains*," as she called them, in the region of the womb, extending up in the direction of the lateral ligaments of that organ. She informed me also that she had suffered much from pain and weakness of the back, and also from pain and a numb sensation down the inner portion of the thighs, and had been a prey to fluor albus ever since she had left her bed of confinement, with the exception of her catamenial periods, which are very irregular. She stated that the secretion was often very profuse, indeed alarmingly so; that she would be confined to her bed for weeks at a time, had to consult physicians, take medicine to check the hemorrhage, &c.; then she would be put on the use of tonics, to strengthen her system, as well as to correct the fluor albus. At length she was advised by her physicians that she was laboring under prolapsus of the womb, and underwent the routine of treatment in such cases, horizontal position, tonics, astringent injections, the use of the pessary, &c., but all to no effect, except the relief she invariably obtained from the horizontal position. Disheartened by repeated failures of various prescriptions, and almost exhausted by disease, she was advised to consult the late Dr. Purgsley of this city, who was thought to be very eminent in his profession, especially in the branch of surgery; the Dr. advised she should be removed to Nashville, saying upon examination she was laboring under polypus of the uterus. Accordingly she was brought in, and after some preparatory treatment, he applied the ligature, but it was attended with so much pain, that it was impossible for her to bear it; the pain was so severe as to produce fainting, vomiting, and even threatened convulsions. The symptoms were so alarming that the Doctor took off the ligature and abandoned the operation, but directed his attention to her general health, which was very much improved under his prescriptions for the time. Mr. Moore moved to

Louisville and resided there until the year 1834, at which time he returned to Nashville; during her absence she had consulted many medical men, but all to no purpose.

At the time I was consulted I found her in a deplorable situation: she was laboring under hectic fever, had profuse night sweats, hacking cough, and all the symptoms indicative of a rapid decline; on examination I found a tumour occupying the vagina, about the size of a large pear, and answering in every respect the description usually given of a polypus. The vagina itself was very irritable and much ulcerated, so that it was impossible to make a very minute or satisfactory examination. However, from the history of the case, and the opinion of other medical men who had examined it previous to myself, in some of whom I had the utmost confidence, I concurred with them in the opinion that it was a *polypus.* But being at that time a young practitioner, having been but two years in the profession, I requested that some other physician should be called in to assist me in the operation; Dr. Waters of this city, was called in, than whom no one is more intelligent or expert in the practice of surgery, and after an examination and a few days of preparatory treatment, we applied the ligature, made of saddler's silk well twisted and waxed, in the following manner: The patient was placed in the usual position for turning the child, one end of the ligature was passed through one of the tubes of a double canula, the other end was attached to the shoulder of the same tube. I took the canula in my right hand, and the end of the ligature in my left, and passed the canula up the vagina to the footstalk or pedicle of the polypus as we supposed; then I applied an instrument, which had suggested itself to my mind, formed out of the stay of a parasol (that supports the ribs) which is notched or forked at the end; I had the notched end filed very smooth and gave it a slight curve, to fit the course of the vagina, which formed a very delicate instrument well suited to the purpose we intended, which I shall call a *director.* After having passed the canula to the point above stated, I held it

steady, and requested Dr. Waters to pass the director up the vagina with the ligature resting in the notched end, until it reached the same point of the canula. I then gave him the ligature to hold, and took the director in my left hand, having the canula in my right; brought the canula up on the right side of the tumour and the director up on the left, until the instruments met on its upper surface; then by passing the end of the canula over the notched end of the director, let the ligature fall into the notch or fork of the director. I then held the director fast, and retracted the canula outside of the vulva, passed the ligature up the other tube of the canula, then passed the canula again into the vagina, containing now as you perceive both ends of the ligature, up to the end of the director, which relieved it of the ligatures it contained in its notched or forked end, and completely encircled the neck of the tumour. I now withdrew the director, and made the other end of the ligature fast to the shoulder of the other tube of the canula, drawing the ligature as tight as we thought safe for the time. Although two hours before we commenced the operation we administered to her a full portion of spirits of camphor, hartshorn and laudanum, the tightening of the ligature gave her a great deal of pain, so much so that I repeated the stimulus and narcotic. I remained with the patient for four or five hours; at first she was very much prostrated, her pulse sunk to a mere thread. However, within four hours she became composed, reaction took place and she rested tolerably well the first night; I watched her closely and saw her frequently and tightened the ligature every morning for eighteen days, at which time it came away. You can readily imagine my surprise upon the examination of the tumour, to find it, instead of a polypus as was supposed by all who had inquired into the nature of the case, to be the uterus itself, although very much reduced in size by ulceration and strangulation. The vagina was much ulcerated and emitted a very offensive sanious discharge as I before mentioned. I directed frequent injections into

the canal, of a solution of the chlorate of lime, as an antiseptic, and a solution of the nitrate of silver, as an application to the ulcers. I sustained the general system by the use of tonics, such as the muriated tincture of iron, phosphate of iron, quinine, &c., and a generous diet when the absence of febrile excitement would admit of it.

She was a long while recovering and did not leave her bed for months after the operation, but finally was restored to perfect health, and I venture to say, she is as fine a looking woman of her age as walks the streets of this city to day. She has never menstruated since, of course; I had to bleed her frequently for the first twelve months after her recovery, and give her purgatives to relieve headache and a tendency to vertigo, as well as a general plethora of the system, occasioned, I have no doubt, by the premature suspension of the catemenial secretion.

It is evident in this case that the uterus was inverted at the birth of her child, and that that was the prime cause of all her bad health and suffering for the twelve years previous to the operation.

You see gentlemen I have acknowledged the error I committed here in extirpating the uterus, when I supposed it to be a polypus. However, I have this apology to offer as an extenuation, that Dr. Newnham, an English surgeon, who has written a very learned essay on the subject of inverted uterus, frankly states that he extirpated a uterus, which he thought to be a large sized polypus, and this fact induced him to write and publish on the subject. Moreover all the medical gentlemen who had examined this case previous to myself, had given it as their opinion that it was polypus, and in fact the parts were in such a condition when I saw the patient, that it was impossible to make a minute examination. This case is written out from notes taken at the time I attended the patient. I am aware that it is imperfectly done, but the facts are set forth as they occurred, and that is the principal object, as I understand it, in reporting a case.

Case II.—*Acute Laryngitis Relieved by Tracheotomy.*—Captain Jesse Johnson, of the steamboat Water-Witch, was attacked with bilious pneumonia, at Smithland on the Ohio river, at which point he received medical aid, and was partially relieved; he arrived here on a boat, on the 12th of February, 1837, at which time I was requested to attend him. I found him with considerable fever, and irritation about his chest, distressing cough, expectoration streaked with blood; I bled him freely, gave him mercurial purgatives combined with pulvis antimonialis, and attended him up to the 20th, at which time he was convalescent. He continued to improve up to the afternoon of the 24th, when I was again sent for in great haste to see him. I found him very hoarse; he complained of sore throat, with great difficulty of breathing, and oppression about his chest; I ordered him an emetic of antimonial wine, and cupped him freely over the chest, which relieved him very much for the time. I learned that he thought himself much better that morning and was sitting up and walking about his room; the room being quite warm, he imprudently hoisted a window, and sat opposite it in the draft of air, until he became chilly and hoarse. I visited him the next morning and found the soreness of throat and hoarseness to have increased; I applied a strong solution of the nitrate of silver to the *fauces*, and a blister to his throat, which seemed to afford some relief for a short time; I also ordered that he should inhale the steam from the spout of a teakettle containing warm vinegar and water. It was very evident from the symptoms existing at this visit, that he was laboring under *acute laryngitis.* I was sent for at 2 o'clock, P. M., in great haste, and found my patient very much worse, his face livid and pale, great anxiety of countenance, general restlessness, stridulous breathing, paroxysmal cough, and threatened suffocation. I immediately sent for Dr. Jennings of this city, and on his arrival we agreed on performing the operation of *tracheotomy.* We placed a pillow under the back of the patient's neck, so as to make his throat as prominent as possible, and divided with a scalpel four of the rings of the *trachea*, below the thyroid

gland and introduced a canula. The air rushed into the lungs and resuscitated our patient like a *charm;* I say resuscitated, for he was to all appearance in the very act of dying the most agonising death I ever witnessed. The respiration gradually resumed force and frequency, the pulse which before had been intermittent, became steady and increased in frequency. The countenance lost its livid appearance, and the whole surface became covered with a warm perspiration, and consciousness returned. The inflammation of the larynx subsided gradually, the canula remained in the tracha until the 17th of March, at which time I removed it, making twenty-two days from its insertion; I placed a strip of adhesive plaster over the wound, and it healed kindly in a few days.

It is now six years since the operation was performed. I had the satisfaction of seeing Capt. Johnson at my office the other day, and conversed with him respecting his general health, which has been very good ever since he recovered from this attack, although he has never entirely regained the strength and tone of his voice.

Much might be said respecting the pathology of this disease, especially upon the effect produced on the brain and nervous system generally by want of due oxygenation of the *blood;* the difference between the acute and chronic forms of layrngitis, as well as the propriety of the operation; the choice of the operation as it respects that of laryngotomy and tracheotomy, the former by piercing the crico-thyroid membrane with a large sized trochar passing directly into the larynx, and that of tracheotomy, as performed in this case. I would give a decided preference to the operation of *tracheotomy* below the thyroid gland, as it is removed from the seat of the inflammation, which it might augment—but in the chronic form of the disease, or in *croup in children*, I would prefer to pierce the crico-thyroid membrane with a trochar, and introduce a curved canula.

ART. III.—*Singular effects of Ipecacuanha.*—A Case reported to the Medical Society of Tennessee. By FELIX ROBERTSON, M.D., of Nashville, Tennessee.

The summer and fall of 1823 and '24, were extremely sickly, fevers of a high grade prevailed throughout this region of country. The necessary labor and exposure in attending to an extensive country practice had nearly worn me down, had greatly reduced my strength. About the last of October while putting up a dose of powdered ipecacuanha, I was suddenly seized with a violent attack of asthma, attended with the most distressing dyspnœa and oppression at the precordia. Bleeding and active cathartics relieved the attack in five or six days. This kind of attack was repeated several times before I was confident they were brought on by breathing the dust of ipecacuanha. This however was at last reduced to a certainty, but not before my weakened health, &c., laid me liable to attacks from other exciting causes.

In November 1825 I left on business for Texas, but hoping the change of climate might have a good effect on my greatly enfeebled health. I of course was exposed in such a trip to many causes that might have been expected to bring on attacks of the asthma, such as sleeping in the open air, &c., &c. I was absent on that trip six months, and returned to Tennessee in apparently better health than I had enjoyed for several years past, not having had the slightest attack of the disease during my absence. A few weeks after resuming the business of my profession, I felt unwell, with deranged state of the stomach, and thought it advisable to take an emetic—wishing to take a mild safe article I concluded to take wine of ipecac. and never dreamed of any unusual bad effect it could have on me. From the moment I swallowed it I felt in the throat and stomach a sensation totally indescribable, but as intolerable to be borne, (if life could have been sustained under it), as if I had taken a drink of melted lead. It was so overpowering that I was unable to think of any

method of relief, but in the most distracting agony leaped out of bed and rolled over the floor from side to side of the room. At length I was urged to drink copiously of warm water, which produced vomitng and some mitigation of my intense suffering. This distress slowly subsided and settled into one of my worst attacks of asthma. I was again subject to these attacks from the smallest particle of ipecac. breathed, or the fumes of burning sulphur; and the exciting causes seemed to multiply with every return of the disease, and my health became so feeble that I was seldom able to attend to the calls of my profession, and was compelled entirely to give up country business. I at length determined to try the effect of reducing the thickness of my clothes, to sleep on a hard mattress under as light covering as possible, and avoid if possible getting into a profuse perspiration, which always appeared to invite an attack. At the same time I determined to use snuff for the purpose of lessening the sensibility of the nasal membrane, as my attacks seemed to commence generally with a feeling of irritation of that membrane, which rapidly extended itself to the bronchia and all its ramifications. My attacks from this period became lighter, of shorter duration and with increased intervening intervals, and in the course of a year I got entirely clear of them, except occasionally some dyspnœa from accidentally coming in contact with ipecac. from stepping into an apothecary's shop shortly after the article had been handled.

For some seven years past I have not had a severe attack, and my general health has greatly improved. About three years since I was induced to put my tongue to some liquid in a vial that was believed to be wine of ipecac,, a patient wishing to take it if I knew it to be that article. I had of course not forgotten the terrible effects of the emetic I had once taken, but believed I could taste it without any injury arising from it. In an instant that peculiar, burning, indescribable sensation was felt in the mouth, which rapidly extended itself to the fauces and down the throat and bronchia, and for two hours I suffered greatly, and had considerable dyspnœa,

all of which gradually disappeared; and while I retain my understanding no such intimacy will ever be repeated with the fated article. What makes the case more remarkable is that ipecac. had always been with me a favorite article of medicine, and no one handled it freer or with less reserve up to the very day it committed such an unprovoked and desperate attack on me.

I observed in some of my attacks a very curious sequela. When expectoration became free and mucus was formed in great quantities by the mucous membrane of the bronchia, in the morning, after resting through the night from the cough, expectoration would commence freely on stirring about a little, and mouthsfull would be thrown up, which any person at first sight would have pronounced to be a mass of small, nearly transparent worms—on close examination I discovered it was thickened mucus which had collected in the small ramifications of the bronchial tubes during sleep, and was actually discharged so as to be real casts of those tubes. This would sometimes be thrown up in such quantities, in the morning, that it really surprised me that sufficient air could have been passed through the lungs for the purposes of life while sleeping.

ART. IV.—*An Account of an Osseous Deposit in the Dura Mater.*—Read before the Medical Society of Tennessee. By J. W. STOUT, M.D., of Nashville, Tennessee.

The deposit occurred in a negro man named Jacob, who was executed for the murder of his master. He was aged about twenty-seven years, of very large muscular development, and excellent health; was never known to have any affection of his head either mental or physical; on the contrary he was considered more intelligent than country negroes are. His habits were of a temperate order; he is said to have

been very irritable and remarkably free from fear when excited; indeed he met his fate with almost Socratic fortitude. From a small boy he was remarkably cruel, fond of inflicting pain upon animals, and habitually but little attached either to human beings or the brute creation. His head was well formed, and his features very expressive for a negro.

The deposit was situated along both sides of the great falx of the dura mater and in that part of it nearest the falx; it extended for more than two inches along the line above mentioned, though it was not deposited in equal abundance nor continuously throughout that extent. Here and there it appeared as if but one or two fibres of the membrane were ossified, and in two places on one side of the falx, and one on the other, it was deposited in laminae of the size of the thumb nail and of two or three lines in thickness; its surface was rough and the edges sharp-pointed and serrated; the adhesions of the dura mater with the parts beneath was more extensive than is usual at these points; it produced a distinct indentation in the cerebral mass. Besides the above deposit, small depositions of calcarious matter were noticed in the substance of the lungs at various points.

Ossification of the fibrous, cartilaginous, and fibro-cartilaginous tissues, is very frequent in persons advanced in age; at this period the fibrous tissue of the sutures is changed and the sutures themselves become obliterated; the cartilages of the larynx, ribs, &c., are converted into bone; the symphysis pubis becomes agglutinated and similar changes occur in various others of these tissues, some of great detriment to the individual, and attended with considerable interruption of some of the vital functions. But when this deposition occurs at an early period of life, as in this case, and in parts where it does not most generally occur in the progress of life, it ceases to be a physiological phenomenon, and must be considered as the result of morbid action. That this alteration in early life is dependent upon some irritation is evident from various facts which have been observed, as for example the conversion of fibrous tissue in the neighborhood of fractured

bone into bone, especially about the joints; and it has been perfectly ascertained that some exostoses have in reality no connection with the bone itself from whose surfaces they shoot up, but are formed exclusively from the periosteum which after an attack of chronic inflammation, attended with pain and swelling, has been converted into bone.

The irritation sufficient to give rise to a deposit of the character of the one now under consideration, did not occasion any serious symptoms, as is evident from the account of his general health; still there might have been a chronic and not very violent irritation at work; the irritability of temper he evinced would seem in some measure to corroborate the opinion. That there was some irritation preceding or subsequent to it, I think we are justified in believing from the more than natural adhesion which existed between the dura mater and tunica arachnoidea, though that irritation may not have been at any time sufficiently acute to have occasioned him any very great degree of uneasiness, or to have elicited the observation of any one.

The pressure which it must have exerted upon the brain, was at least equal to that which would have been occasioned by the depression to the same extent of a part of the inner table of the skull co-equal in size with it; now it is a well known and long established fact in surgery, that symptoms urgently demanding the use of the trephine are occasioned not unfrequently by a very slight fracture and depression of the vitreous table. The absence during the whole life of this individual of all the symptoms of compression seems to me, in view of the above fact, to be somewhat astonishing, and can only be accounted for by considering that it did not take place suddenly and all at the same time as in fracture; and by its gradual formation the brain was enabled to become accustomed to its presence, and for the same reason it did not occasion any considerable or acute symptoms of irritation.

That this kind of deposit in this situation, does sometimes occasion death, I have learned from examining some writers on

pathology. Abercrombie, in his treatise on the brain, speaks of the occurrence of osseous developments in the dura mater as very common, most common in the falx major. Many cases of it are on record he says (but he does not mention whether they occurred at an advanced period of life or not), which did not appear to have produced any symptoms in the brain. In other cases however, he remarks, they seem to produce urgent symptoms, especially when they are in the form of sharp spicula or have acute angles which are so situated as to irritate the brain or its membranes. In a case of this kind by Laviard there was, in the broadest part of the falx, a small triangular piece of bone with sharp angles, and where the dura mater came in contact with these it was livid and discharged pus. In another by La Motte, which was connected with epilepsy, the bony spicula were directed against the pia mater; and in another by Van Swieten there was a large piece of bone in the substance of the brain. In a note, the American editor of the Dublin Dissector mentions that he has a specimen of ossification of the falx cerebri taken from a subject who died of apoplexy.

Most authors whom I have been able to consult, do not consider it as of very rare occurrence, nor that it is attended with inconvenience. Andral remarks that large cartilaginous or osseous plates are not unfrequently found in the meninges; the tentorium, he says, has been occasionally seen completely ossified. Dr. Baillie observes that the formation of plates of bone is one of the most common appearances of the dura mater. Dr. Gross has frequently observed them, and is inclined to consider that they originate rather in the subserous cellular tissue than in the membrane itself; he has most commonly noticed them in the falciform process, in masses from the size of the finger nail to that of a Spanish dollar, and says cases are given in which the whole of the dura mater of one hemisphere was ossified. Bichat says they are not rare and have their seat upon the internal surface of the membrane most frequently, but may happen in any part.

ART. V.—*A Case of Intermittent from Birth, and its subsequent progress.*—Reported to the Medical Society of Tennessee. By Dr. B. W. AVENT, of Murfreesborough, Tennessee.

During the early part of the summer of 1839, a lady in her fifth month of pregnancy, who lived near one of the water courses in the neighborhood of Murfreesborough, was attacked with intermittent fever, assuming a tertian form. She took the usual remedies advised in cases of this character, and in a short time the chills left her. In two weeks, however, she had a return of them, and was again relieved by similar remedies. But it seemed that the cure still failed to be permanent, and she soon became the subject of a chronic form of intermittent. Owing to some prejudices, growing out of her condition, she did not again apply for medical aid, but up to the time of her delivery was considered in bad health, looked pale, and had dropsical swellings—every change of weather, or variation from the strictest course of regimen, produced a recurrence of the disease.

On the morning of the 21st September, she had a chill, as had been the case on every other day, for the past two weeks. On the going off of the fever, which followed the chill to day, she complained of uterine pains, which continued to in crease until evening, when I was requested to visit her. A natural though tedious labor was completed at nine o'clock on the following morning. The child was of common size, and breathed and cried healthily. I visited my patient, or rather patients, again in the evening, and learned that the child had been suffering very much (in the language of the nurses and friends) from cold—that its extremities had become cold and shrivelled, its lips blue, and its breathing disturbed; so alarming indeed were the symptoms, that they believed the little sufferer to be dying. This cold stage, though, had now given way to a general and pretty free re-action throughout the system. I saw no alarming symptoms in the

case, and satisfied the family that such a state of things as they had mentiond, was not of unfrequent occurrence, and that, at present, there seemed to be nothing calculated to excite alarm.

On the following morning, I found the child seemingly well—but as it was the day in course for the mother's chill, I soon discovered that she would not escape. I now put her under treatment, and with some difficulty finally succeeded—by the end of the *month* in relieving her entirely. She had no more chills after she got up. But to recur to the child—during this day, it continued to do well, sucked heartily, and slept on as young children usually do.

On the next day, 24th of September, I called during the morning, and satisfied myself as to the improvement of the mother's condition, and having only enquired after the child and learning that it was well, I did not examine its situation. But in the evening it was not so well—and at the same hour that the alarming symptoms appeared on the first day of its birth, it was again attacked, in the same way—*yawned, stretched, grew cold, lips became blue, and breathing again interrupted*—these symptoms lasted an hour, and gradually subsided, and I have no doubt from the report of the family, were followed by fever.

On the 25th, I visited the family, when I learned the history of the preceding day, as I have related. The child had no fever this morning, but was evidently pale, feeble, and fretful; I gave it no medicine and promised to return on the morrow.

Twenty-sixth: I learned this morning that the child had no return of the unpleasant symptoms during the day before. I concluded to remain this day, and watch the case; I gave no medicine with a view to producing a change in its condition, and suspecting that this was becoming a regular case of intermittent fever, waited patiently, and watched closely every symptom. In the evening there was a recurrence of the cold stage, at the same hour of the previous days, and all the leading symptoms of confirmed intermittent were pres-

ent. Fever followed and lasted some two hours or more, and was carried off by profuse perspiration, so much so, that I was alarmed for the safety of my little patient. Concluding that a treatment was now necessary, and it being a case of *ague and fever* I determined to use ague and fever medicine. I gave it half a grain of calomel, which operated well on its bowels during the night.

Twenty-seventh: on this day quinine was used, but as it was not the day for the chill, I used it in small doses and at long intervals. On the 28th the quinine was used more freely and kept up regularly, until past the time for the chill to come on. The patient this evening escaped, and I was satisfied the medicine had done well. I now advised the family to use the quinine in small doses on the expected days for the chill, so as entirely to break up if possible the predisposition to the disease. I heard nothing more from the case until October 1st, five days afterwards, when I learned that the child was again attacked, and that the symptoms were similar to the previous attacks. The quinine was again used with success; after this the child continued to improve slowly, and grew some, but still looked pale, and was thought not to be well.

About the 1st of November, the disease returned, assuming the same character, and was temporarily relieved by the same remedies. I now found that this disease had become completely fixed upon my little patient, and that other remedies besides quinine must be resorted to, or a cure could not be affected. I tried some of the preparations of iron, and in a word all the various *specifics* and *nostrums* for the cure of intermittents were successfully used, but had no other effect than that of affording temporary relief.

For twenty months the disease continued to attack the patient, and up to the present time, a period of more than three years, this child is still weakly, pale and small—though at present he is in better health than he has ever been, and has not had a chill for about four months. Hopes of his entire recovery are now entertained. I cannot say what remedy did

most good, or most harm in this case; suffice it to say, that nothing afforded more than temporary relief.

An argument in favor of three very important principles in pathology, I think, may be adduced from this case: First. that *intermittent fever* may be congenital. Second. That the great cause, whatever it may be, which produces this affection, conveys its poison through the circulating system. Thirdly. That intermittent fever is a disease *sui generis.*

ART. VI.—*A case, of Functional, Simulating Organic Disease of the Heart.* By H. R. ROBERTS, M.D., Columbia, Tennessee.

February 2d, 1843, I was requested to see Mr. A. D. Bailey, a citizen of Columbia, by trade a hatter, who had been taken ill about a week previously. I found him in the following condition as recorded at the time: Entirely free from pain, skin and expression of countenance natural, tongue clean, and appetite good, some little cough with free expectoration; accompanying these favorable symptoms were others of a different character. The action of the heart was exceedingly irregular, and occasionally rolling or bounding against the walls of the chest with alarming violence, then rapid, feeble and intermitting. The pulse was still more remarkable, and did not correspond entirely with the action of the heart: for a moment it would be too rapid to count, after which there would be an intermission succeeded by a few strokes that were slow and bounding; between each of these pulsations the sensation communicated to the finger was of a quivering or fluttering character, as if the blood had been thrown into a soft elastic tube; there was not sufficient tensity to give it a thrilling sensation. The artery was loose, and could be easily pushed out of its position and contorted with the two fingers into the shape of the italic *S.* The breathing was easy in any position, though there was a percep-

tible shortness of breath when talking, which would cause a by-stander to feel uneasy at the the termination of each sentence. I was called in to give an opinion relative to the pathology of the disease, and enquired particularly into the history of the case. I learned that about ten days previous to the time that I saw him, he had first discovered an irregularity in the heart's action, accompanied with some difficulty of breathing on lieing down at night, which was soon followed by an irritation in the throat, cough, febrile symptoms, &c. I also learned that on the preceding day, when he was first taken, he had eaten an enormously large quantity of a mixture composed of snow, cream, and sugar, and that he had been a good deal exposed to the severe and disagreeable weather that occurred about that time. And then there were other exciting causes which I was already aware of, and which I believed had no inconsiderable influence in bringing on this state of things. I knew him to be a man of strong intellect violent prejudices, great nervous mobility, and exceedingly sensitive; his mind had been about this period actively engaged in the discussion of an exciting question at a Mechanic's Society, and he had been forced by his creditors into bankruptcy, which his pride and extreme sensitivenes could not well bear.

As it was a matter of the utmost importance to determine whether the affection of the heart was merely functional, or whether the organ itself or its capsule was the seat of disease, I enquired of him if at any time preceding the present attack, he had been aware of an irregular action of the heart; if, on taking violent exercise, such as running, walking rapidly up hill, or ascending a flight of stairs, it had not been increased, or if there was not oppression and difficulty of breathing. He had not been aware of any, though he had often taken such exercise, until the day before he was confined to his bed; his pulse he thought had been uniformly natural, and I remembered myself to have examined it at one time during the last summer, when he thought he was threatened with an attack of fever, and there was nothing remarka-

ble about it. As he could at this time easily get in and out of bed, I requested him to do so and suddenly to assume the erect and recumbent posture alternately. I found but slight if any alteration, either in the action of the heart or pulse; there had not been at any time a symptom of cerebral determination or congestion, no headache, tinnitus aurum, or stupor; though the pulsation of the carotids could be distinctly seen, there was none of that universal throbbing, with weight and tension, increased by stooping or resuming the recumbent position, so characteristic of hypertrophy; again there was not the full, firm, strong, and sharp pulse which belongs to that disease. As the attack was sudden, an acute inflammatory affection of the heart or the pericardium might be suspected. I pressed my fingers forcibly upon the intercostal spaces, requested him to bring a long breath, lie alternately upon the right and left side; no pain, uneasiness, or oppression was produced. There had been no disposition to syncope, no marked anxiety in the expression of the countenance; the fever had been mild; the cough, though at first dry, was now accompanied with free and easy expectoration; no pungent or lancinating pain in the precordial region, or shoulder and arm: neither carditis or pericarditis could exist under such circumstances. Had I been governed alone by the action of the heart and arteries, the disease might have been pronounced pericarditis in a sub-acute form, for the pulse was of that fluttering, irregular, and intermittent character which marks that disease, but there was no other symptom to corroborate it. On forcing the epigastrium upwards underneath the left hypochondrium, there was no pain or uneasines produced, not the slightest disposition to faintness, no dyspnœa or anxiety, and, as I have before observed, any position could be assumed in bed without difficulty. I do not profess to be an adept in that most valuable agent in diagnosis, auscultation, and I have to regret that I am not so; but the following were the physical signs present at the time that I saw him. By percussion on either side of the chest, if with any degree of force, there was a tickling or uneasy sen-

sation produced, that I do not remember to have observed in any other case; it was not painful, but so unpleasant that he would not bear it often. There was but little difference in the sound on either side as high up as the clavicle; about the fourth or fifth rib on the left side it was slightly flat and dull. The range of the sound of the heart was extensive, and could be perceived over a large portion of the exterior aspect of the chest; the action was tumultuous, producing a general commotion rather than a forcible and circumscribed impulse. The respiratory sound was clearly perceptible on the whole of the left side of the chest, and on the right, except a circumscribed space of about six inches, and even there it may have been masked by the sound of the heart—over the sternum and along the course of the bronchia the moist crepitous ronchi were very distinct. I will just here remark that pressure on the epigastric region caused very considerable uneasiness; his appetite was voracious, indeed perfectly ungovernable.

Having made this examination, I was prepared to give an opinion, that the disease of the heart was functional, proceeding from nervous irritability, and sympathetic with a subacute inflammation, evidently existing in the mucous coat of the stomach and bronchia; and I regarded the immense quantity of the freezing mixture he had eaten, the depressing moral causes that were constantly operating upon a mind remarkably sensitive, quite sufficient to produce all the phenomena now observed. I told him that I did not regard the case as immediately dangerous, but that an action so violent and irregular could not long exist without producing an organic affection—most probably hypertrophy. At the time he did not wish to be put upon any course of treatment, and I left without recommending any. He continued a few days without improving and I was again called and requested to treat the case. Basing my treatment upon the pathology I have given, I enjoined perfect rest, forbid all exciting causes both physical and mental, and attempted (though I did not well succeed) the strictest course of abstemiousness. A blister

had before been applied over the epigastric region, extending as high up as the fourth or fifth rib; I had it re-applied; and to quiet nervous irritability and check the cough which was somewhat distressing, gave a mixture composed of the extract of hyoscyamus and squills. I found him the next day a little more quiet, and he had rested pretty well during the night, expectorating freely; the same course was continued, with the addition of a small morphine pill at night, for several days; but the action of the heart was still rapid and irregular; cough improved very much. I now determined to try fully the efficacy of digitalis, and gave it in doses of thirty drops of the tincture, three times a day; the morphine still given at night. Under this treatment all the symptoms improved: the action of the heart became more regular and less rapid; cough had almost entirely disappeared; his appetite was now the most formidable thing I had to contend with, and it was astonishing what influence the slightest imprudence in eating exercised over the action of the heart. He was himself aware of the fact, but acknowledged his inability to govern it; a mild purgative would, however, generally afford relief. This course of treatment was pursued with slight variations for two or three weeks; in the meantime cups had been applied over the epigastrium, and a blister between the shoulders. He was now so much improved that he insisted on going to the country; as he would then be away from the scenes of his misfortunes, and the many depressing causes that were still operating, I consented for him to do so. He bore the ride of ten miles, and sent me word at night that he felt quite well; unfortunately for him there came on at this time the long cold spell of weather we had about the first of March; the house he was staying in was comparatively very open; his diet was not such as he had been accustomed to, and he very soon became dissatisfied. The symptoms began to grow worse; he took violent cold and had most distressing attacks of palpitation; for two weeks he had to bear this state of things; at the end of that time, however, he came to town very much exhausted, and evidently much worse. Under the

influence of anodynes, however, he slept well the first night, but the next day I witnessed the most distressing scene. I found him propped up in bed, face livid, anxious expression of countenance, distressing dyspnœa, and arterial blood occasionally gushing from his mouth, the action of his heart tumultuous, and capillary circulation suspended. I now suspected that the right side of the heart had been enlarged. I saw that congestion of the lungs must be removed or death would in a few minutes be the inevitable result. The lancet was in my hand, but I could not bleed with a soft, feeble, fluttering pulse that would vanish upon the slightest pressure. All that was left for me to do then was to quiet, by whatever other means I had in my power, the spasmodic action of the heart, restore capillary circulation and induce the blood to the surface. No time was lost in administering such remedies as were calculated to quiet nervous irritability, and reduce spasmodic action; besides these, mustard plasters were applied to the wrist and ancles, friction on the legs and arms with dry mustard was kept up until sufficient excitement was produced to create a glow upon the surface; a belladonna plaster was also applied over the heart. In a short time the flurry began to subside; I now learned that he had eaten very imprudently that morning, and I attributed many of the distressing symptoms he had just had to that cause. To keep up the regular action a saline cathartic was administered; at night a hot pediluvium, followed by friction with dry mustard, accompanied with an anodyne draft, rendered him perfectly quiet, and he slept comparatively well.

The next day the same scene was partly enacted over again, though with much less distress. There was evidently great irritation in the bronchial tubes and their ramifications; a large blister was applied on the breast, and a saline draught given which operated well; hyoscyamus, squills, and laudanum, relieved greatly the irritation, and the cough together with the hemoptysis was gradually subsiding; after a day or two the digitalis was again used, a pill composed of calomel, squills, and ipecac., given night and morning—he now im-

proved rapidly, and in a short time the action of the heart and pulse became almost natural. Moderate exercise was allowed, and so long as he could be prevailed upon to live lightly no unfavorable symptom was present; this however was almost impossible, and he was frequently under the necessity of taking remedies to relieve oppression in consequence of imprudence in eating. As he grew better his pulse increased in force and tensity, so much so as to require bloodletting two or three times. I left him attending to his ordinary affairs; and as his business at this time is of an exceedingly unpleasant character, well calculated to irritate and depress, a return of the malady may be reasonably calculated upon.

As this case was under my care nearly three months, during which time the treatment was often varied to suit each particular symptom, I could not in a report already made too long give it in detail. My object has been to show that, notwithstanding the disease in many of its features resembled an organic affection of the heart, it was strictly functional; and I have no hesitation in saying that the treatment which would have been indicated had it been organic, would in this case most certainly have proved fatal.

ART. VII.—*Some Account of the Disease called by the people "Black Tongue," which prevailed in some parts of Missouri, in the winter of* 1842–'3. By Dr. E. H. BENNETT, of New Madrid, Missouri.

This disease, which appeared first in our neighborhood at Point Pleasant, eight miles south of New Madrid, early in the winter, and prevailed with uncommon mortality during the cold season, comes on with a feeling of lassitude, loss of appetite, slow fever, thirst, fulness of head, sneezing, cough, and an acrid watery discharge from the nose and eyes. These symptoms constitute the stage of access, and in vio-

lent cases are succeeded in from five to ten hours by a severe chill, and excruciating pains sometimes in the forehead, and again in the eyes, which occasionally in a few hours swell, close, and grow black, as if bruised by a blow. In other cases the pain is felt in the end of the nose, or in the side of the head, in the neck, the shoulder, the elbow joint, the wrist, or some of the fingers. Often the seat of pain is the breast, side, or abdomen, in the region of the liver, heart, stomach, or kidneys, and in other instances the pain is most intense in the lower extremities. The chill in many cases of the epidemic persisted until the patient sunk under the attack; but generally after a cold stage of from nine to twelve hours a partial reaction took place, with dryness of the mouth, parched tongue, a dark stripe in the middle, and white edges. In some of the cases, the tongue was natural, in others too pale, and in these the secretions were natural.—Some complained of a sense of burning in the stomach, and of inextinguishable thirst. The throat, in some instances, was the principal seat of the disease, swelling to such an extent as to render deglutition almost impracticable, and greatly embarrass respiration, the face becoming livid and *œdematous*, the pulse feeble and tremulous, extremities cold, perspiration limited to the face, and cold.

In twenty-four or thirty hours, in most cases, the swelling of the throat subsided, and the breathing and swallowing became free. The pain was then transferred to the region of the heart, extending down both sides to the region of the kidneys, exciting a continual desire of micturition. These symptoms were succeeded by others of greater violence—as cold extremities, incessant tossing, wild countenance, and death, in from ten to twenty-four hours. During the month of January, of this character I had five cases, of which four had a fatal termination. It was this aspect of the endemic which excited the fears of our citizens, that the disease was that which had been reported as prevailing with great mortality in New York, and was called the "*black tongue.*" The tongue becoming deeply engorged by the tumefaction in the

throat, coated with a dark brown fur, and protruded, as it occasionally was, beyond the teeth, presented a feature well calculated to give that name to the disease. It was not the usual progress of the complaint, but in some cases a decided re-action succeeded to the symptoms of depression, requiring an active depletory treatment. In far the greater proportion of cases, the type was decidedly typhoid, and that treatment which I found most successful was a combination of the anodyne and stimulant, topical rubefacients having been used extensively, and with marked advantage. As the weather began to grow warmer the disease put on rather more of an inflammatory type, but an active cathartic rarely failed, even then, to convert the case into one of a typhoid character, in which collapse not unfrequently appeared in a few hours, to the destruction of the patient.

In January, I attended one hundred and fourteen cases of the disease, five of which were fatal; in February, I had sixty cases, and lost but one; in March, fifty, losing five; in April, between fifty and sixty, of which I lost two. The following case occurred in the latter month, and is reported as affording a good epitome of the features of the epidemic:

A negro man, forty-eight years of age, of robust frame, was attacked on the night of the 6th of April, with the prevailing disease. For a year previously, he had been troubled with a dry cough, and symptoms of chronic hepatitis. His health up to that time had been good. The chill seized him at two o'clock in the night, and continued till day, when sinapisms, hot teas, and hot bricks applied to the extremities induced a partial reaction. Violent pain in the eyes, and across the forehead, succeeded, attended with frequent vomitings of a tough mucus, tinged with bile and blood.

Seventh. I was called to visit the patient about eleven o'clock, A. M.; found him complaining of a deep seated pain in the head and eyes, sense of burning in the breast, thirst, nausea, accompanied by vomiting; skin moist and cool, great prostration, pulse small, quick, tremulous; cough, with hurried and laborious breathing; eyes red and half closed; edges of the tongue white, a dark stripe in the middle, coated with

a tenacious mucus and bile; low muttering delirium, and great alarm.

Treatment.—A gentle cathartic, with anodynes and stimulants, and sinapisms to the extremities.

Two o'clock, P. M. Expectoration freer, mucus tinged with blood, skin has regained its natural warmth, pulse of better volume, and more regular beat; mind clearer, but the patient is very fearful of dying; has taken no nourishment: great tossing.

Eighth. Vomits a chocolate colored matter; breath very offensive; pulse more tremulous; mental wanderings; bowels have been moved gently, passages natural: same treatment to be continued.

Ninth. Considered by his attendants to be better: took some nourishment about day light, turned on his right side, and expired unobserved.

Autopsy.—Heart much larger than natural; stomach natural in color, mucous membrane softened; spleen not more than half the natural size; liver much enlarged, surface paler than natural, substance paler, and softened, vessels engorged with blood; gall-bladder filled with a fluid resembling a mixture of blood and bile. Lungs. The left lobe presented nothing abnormal. Of the right lung, the only parts free from disease were the anterior portions of the superior and middle lobes, the whole of the remaining portions were completely hepatized. The brain was not examined.

The epidemic declined with the opening of the spring, and I am happy to be able to state that our village and county are now free from it, and perfectly healthy.

June 9th, 1843.

REVIEWS.

Art. VIII.—*Tenth Annual Report of the State Lunatic Hospital, at Worcester, Massachusetts*, December, 1842. Boston, 1843: 8vo., p. 115.

2. *Fourth Annual Report of the Directors and Superintendent of the Ohio Lunatic Asylum, Columbus*, December, 1842: 8vo., p. 88.

3. *Twenty-sixth Annual Report of the state of the Asylum for the relief of persons deprived of the use of their reason.* Philadelphia, 1843; 8vo., p. 27.

4. *The Annual Report of the Physician and Superintendent of the Eastern Asylum, in the city of Williamsburg, Virginia, for* 1842. Richmond, 1843: 8vo., p. 38.

The first report before us is from the pen of Dr. Woodward, the gentleman who has had charge of the Hospital since its establishment. Dr. Woodward has rendered himself well and very favorably known to the profession, through his Annual Reports; and has elicited much well merited praise in his own State, for the great amount of good that he has done, in connection with the institution of which he has charge. Since its opening, in 1833, fifteen hundred and fifty-seven persons have been admitted into it, laboring under the various forms of insanity; in the time thirteen hundred and nineteen have been discharged, of whom six hundred and seventy-six were restored to reason; and of the remainder about two fifths were improved; about the same number not improved: and one-fifth either died or eloped. By a somewhat troublesome calculation (which, we protest, the Doctor ought to have made himself, especially as it exhibits a good condition of

things, when we take into consideration the necessary accumulation of old and difficult cases in Asylums for the insane), we find that the per cent. of recoveries on the whole number of patients who enjoyed the benefits of the Hospital during each successive year was:

1833	1834	1835	1836	1837	1838	1839	1840	1841	1842
16.3	27.4	21.5	23.6	22,5	20.9	20.1	20.9	20.5	20.4

By similar calculations we find that the:

	1833	1834	1835	1836	1837	1838	1839	1840	1841	1842
Per cent. of the discharged improved on the whole number in the Hospital in the course of each year, was: - - - - - - - -	4.5	9.4	9.5	6.9	7.5	6.6	7.3	7.4	9.0	5.9
Per cent. of recoveries on all admitted during each year, was: - - - - -	16.3	53.7	46.0	46.4	41.0	42.9	49.1	50.6	50.3	44.4
Per cent. of recoveries of males on the males admitted: - - - - - - - -	13.5	48.5	52.9	48.4	39.3	46.8	40.0	37.0	50.6	41.1
Per cent. of recoveries of females on the females admitted: - - - - -	21.0	60.7	40.3	44.0	43.2	48.2	48.4	62.0	50.0	48.3

The per cent. of all the recoveries of males in ten years on all the males admitted in that time, was 40.7. And the per cent. of all the recoveries of females, in the same time, on all the females admitted, was 46.3.

There is perhaps no question, connected with insanity, of greater importance than the comparative curability of it, at the different periods of the disease. The statistics of all hospitals contain abundant evidence of its far greater curability, if subjected to treatment within the first year; and superintendents are constantly urging in their reports, the importance of sending patients early to asylums, where they can undoubtedly be much better treated than at home. At the hospital whose report we are examining, the per cent. of the discharged cured on the number of the recent cases* ad-

* By *recent* cases is meant those whose insanity was of less duration than one year, at the time of admission; and by *old* cases, those of longer duration than a year.

mitted (for the year 1842), was 64.2, whilst the per cent. of the old cases was only 20.2. Out of the admissions for the same year too, only one of the recent cases was considered incurable; whilst a per cent. of 56.1 of the old cases was discharged as incurable and harmless; and 15.6 discharged as incurable and dangerous. In the whole ten years, there was a per cent. of 88.9 of the recent cases cured, or considered curable; 47.4 per cent. of those who had been insane from one to five years; and only 10.8 of those who had been insane from five to fifteen years.

The report contains also a table which exhibits a favorable state of things in Massachusetts, in reference to the cause of temperance as it bears upon insanity. A proportion of 14.4, of all who have been received into the hospital in ten years, was produced by intemperance. Of the first fourth of the patients, a per cent. of 20.8 owed their attack to this cause; of the second fourth 13.8 per cent; of the third fourth 13.1; and of the last 9.7; showing a progressive and rapid diminution of insanity, as temperance advanced. Whilst however temperance has tended thus plainly and rapidly to diminish insanity, a new and somewhat fruitful source has made its appearance; we mean *Millerism*. In reference to this subject, Dr. Woodward makes the following excellent remarks: and most fully do we concur with him in the sentiments expressed. "Some new views of religious truth," says he, "have recently disturbed many persons who have deep solicitude for their future well-being, and have brought a number of patients under our care. Some of these views are greatly calculated to alarm those who entertain them, and I greatly fear that, for some months to come, this agitation of the public mind may, in this and other communities, add many to the list of the insane.

"Religion, in any view of it, is a solemn subject for contemplation. No individual can feel indifferent to it who has a rational mind, and feels his responsibility to God for the actions of his life. But it is particularly desirable that all

consideration of it should be calm and dispassionate, that we should *live it* in our several spheres of duty rather than seek new dogmas which distract the mind, and unfit it for the high responsibilities of this life, or for suitable preparation for the elevated pleasures of a future existence.

"The Bible itself would rarely make a man insane; its promises counterbalance its denunciations, and its plain and simple instruction shows most clearly the way to pardon and to peace. It is human dogmas and new-fangled doctrines, promulgated by the ignorant and misguided, which are at present distracting the public mind, loosening the cords which bind society together, and, without chart or compass, set mankind forth in search of a heavenly inheritance. When the settled principles of religious faith and hope are discarded, when fanaticism predominates, and the established forms of religious worship are abandoned, then it is that the minds of the weak and excitable are distracted and made insane; then it is that the effort to reach something indefinable and untangible, overpowers the intellect, and often breaks it down and destroys it. This is not religion, but its counterfeit—a base moral currency, unsafe, and worse than useless in its influence, corrupting instead of reforming its victims, and levelling, rather than elevating the moral and religious standard of the community in which it circulates."

Ohio Lunatic Asylum.—According to the history given by the Directors, the Territorial and State Legislation in Ohio, upon the subject of idiots and lunatics, consisted in several acts passed at different times from 1792 to 1815. These acts, in accordance with the prevailing notions of the times, provided merely for a trial by jury to determine the question of idiocy or lunacy in an individual, and for their "close confinement." And, shocking as it would now appear to us, this "confinement" was to be in the county jail, "unless his friends should give sufficient bond for his safe keeping;" and "if committed to jail, the county

commissioners were required "carefully to examine him, and if, in their opinion, medical aid should be requisite, to employ a skillful physician." County commissioners to determine the curability, the possibility of improvement, &c., &c., &c., of a case of insanity! Bless us! What a commentary on Diagnosis!

Pursuing, very briefly, the history of this subject in Ohio, and passing over this benighted period which continued unchanged for more than twenty years (for we feel inclined to cast a mantle of forgetfulness over the past, and turn to a contemplation of the present, or indulge a lingering look at the beautiful perspective of the near and distant future), we learn that, stimulated by an "eloquent memorial" from the Medical Convention of Ohio, the Legislature in the winter of 1835 passed an act, making the necessary provisions for the establishment of her Lunatic Asylum. In March, 1838, a beautiful site having been purchased in the suburbs of Columbus, and the building nearly completed, an act was passed for the government of the asylum; and in the following November, it went into operation. In October, about a month before it went into operation, we ourselves spent an hour or two in the building and grounds; and a vivid impression do we retain of the adaptation of the buildings to the comfort and convenience of the patients and officers; and of the susceptibility of the grounds to be made into such a place as our imagination painted for the health, pleasure, occupation, and amusements of the insane. Whether such improvements have been made, we are not able to say from personal observation, and the report does not inform us.

Since the institution went into operation, four hundred and eight patients have enjoyed its benefits; and, in the whole period, two hundred and sixty-five applications for admission have been rejected for want of room. Based on this, and some other grounds, the Directors with great propriety urge upon the Legislature the importance of making an appropriation for the erection of additional buildings, for the reception of patients.

The legitimate object of reports from Lunatic Asylums in general, is (so far as the medical profession is concerned) to exhibit statistics, whereby we may learn the nature and tendency of insanity, whether to cure, continuance, or death, and the effect of treatment upon it. And the object of reports from particular asylums should, of course, be to exhibit their own condition in relation to these same matters. Accordingly we find on page thirty-three of the report before us, a "recapitulation," made up from a long tabular view showing the statistics of the Asylum from its institution. After giving all the facts, as to the admissions, discharges, recoveries, deaths, &c., the superintendent then, to save his readers the trouble of the calculation, exhibits the per centage of recoveries. And by a superficial examination, we would readily infer that the per centage as given by him, is indicative of the effect of the treatment adopted in the Asylum of which he has charge. But a little scrutiny led us to detect a very essential error in his mode of calculation, by which (if the object be to show the effect of treatment) very incorrect conclusions would be induced. The method of calculation employed exhibits the *per cent.* of "recoveries," on the cases which have been *discharged* from the Asylum; whereas, if the object be that stated above, the *per cent.* should, of course, be upon the number *admitted* into the Asylum, and who have been subjected to treatment. This is obvious, for the reason that the *number* of "*recoveries*" remaining the same, the per centage would be materially affected, as you compare them (the recoveries) with the whole number of any class of patients who have been admitted, or merely with the number of the same class discharged. For instance, the report exhibits:

Whole number of patients admitted (since the Asylum was instituted),	408	
Old cases,	237	408
Recent do. (less duration than one year),	171	
Whole number discharged,	266	

Old cases, - - - - - - -	123	266
Recent do., - - - - - - -	143	
Whole number of *old cases* recovered, -	43	165
Whole number of recent cases recovered,	122	

Taking these facts as the basis of his calculation, and comparing the "recoveries" with the *discharges*, the superintendent gives us:

"Per cent. of recoveries on all the cases discharged, - - - - - - - - -	62.03
"Per cent. of recoveries on all the old cases discharged, - - - - - - - - -	34.95
"Per cent. of recoveries on all the recent cases discharged, - - - - - - - - -	85.31"

Whereas, taking the same data, if we compare the "recoveries" with the *admissions*, we have:

Per cent. of recoveries on all the cases admitted, - - - - - - - - - -	40.44
Per cent. of recoveries of old cases on all the old cases admitted, - - - - - - - -	18.14
Per cent. of recoveries of recent cases on all the recent cases admitted, - - - - - -	71.34

We find too that the same error has crept into the calculation for the hospital year just ended (1842). But from the coincidence of there having been the same number of admissions and discharges, it does not affect the result in reference to all the cases; and the difference between the admissions and discharges of both the old and recent being so small, the result is not very materially affected.

Number admitted the present year (1842).	Old cases,	30
	Recent,	35=65
Number discharged (same year).	Old cases,	31
	Recent,	34=65
Number of discharged recovered (same year).	Old cases,	13
	Recent,	28=41

Pursuing the same faulty mode of calculation the report exhibits:

1st. "Per cent. of recoveries on all the cases discharged the present year, - - - - 63.07

2d. "Per cent. of recoveries on the entire number of old cases discharged the present year, including thirteen discharged by the directors for want of room. - - - - - - 41.93

3d. "Per cent. of recoveries on all the recent cases discharged the present year. - - - 82.35"

Whereas, comparing the recoveries with the *admissions* gives for:

1st. - - - - - - - - - 63.07

2d. - - - - - - - - - 43.33

3d. - - - - - - - - - 80.00

We feel no disposition whatever to attach blame to the superintendent, Dr. Awl, or to ascribe false statements to him; for we have made all the calculations, and find his statements of per centage to be correct according to his mode of calculation. Neither do we wish to attribute to him the purpose of endeavoring to exhibit the institution of which he has charge in a false light; but only to call attention to the fact that the per centage as given in the report, does not afford an index of the effect of treatment of insanity in the Ohio Asylum. It may be urged that it is right to compare the "recoveries" with the "discharges;" since that, some who have been "admitted and subjected to treatment" may be still in the hospital, and with a chance for recovery. But, this can be claimed only for those who come in towards the close of a year for which a particular report may be made; whilst it could not with any propriety whatever be asserted, if we are examining into the results of a series of years.

We have endeavored, by referring to the reports from several other Asylums, to ascertain the general custom in reference to this matter; but most of those which we have in our reach contain but very little upon the subject of per centage, except the one from the Massachusetts Asylum, which we have just noticed; and that does not contain the necessary data to allow us to make a calculation for ourselves, except in

one or two particulars, wherein we find that Dr. Woodward employed the same *mode of calculation* that we have objected to above. But even if at Worcester, and all the other Asylums in the country, this mode of reckoning per centage is employed, it by no means convinces us of the propriety of it; on the other hand, it would more loudly call for a free expression of opinion, convinced as we are that the method is not a fair one, and decidedly calculated to produce erroneous impressions.

The third report is from the institution generally known as the Friend's Asylum for the insane, near Frankford. This Asylum has been in operation twenty-six years; and in that time six hundred and sixty persons have been admitted as patients. Of this number two hundred and seventy-three have been restored; seventy-one much improved; and ninety-two died. At the end of the hospital year for 1841, there were fifty-eight patients remaining in the Asylum. During the present year twenty-five have been admitted; thirty-two discharged and five died; of the discharged ten were restored, six much improved, four improved, and twelve stationary.

Of the fifty-eight remaining at the end of the year, only eighteen were placed under treatment; the balance being deemed incurable. And of the twenty-five admitted the present year only twenty-two were placed under treatment, for the same reason. So that during the year, forty have been under treatment. Out of this number nineteen were recent cases, nine of whom were restored, three convalescent, one much improved, four stationary, one died, and one just received; leaving just fifty *per cent.* of the recent cases cured, with some probability of the per centage being increased by the continuance of treatment with the remaining cases.

The remaining twenty-one, who were subjected to treatment during the year, were all old cases; and only four of them were restored. Giving us nineteen *per cent.* of cures for this class.

Eastern Asylum, Williamsburg, Virginia.—This venerable Asylum was established in 1769; and was like all other asy-

lums of its day, the recipient of patients laboring under a disease universally esteemed almost incurable. They were all then rather places for the safe-keeping and confinement of the insane; for it was seldom that patients were ever taken to hospitals until they had become unmanageable by their friends, and often not until after they had been confined a year or more in a county jail. Placed in a hospital under such circumstances, common sense would teach that there was but little chance of recovery; and modern statistics fully confirm the opinion. How little encouragement then to physicians, having charge of such patients, to make any adequate efforts for their restoration! On the other hand, again, the very small number who were restored and the large number who remained inmates of hospitals for years and years, under close confinement, and severe and often cruel treatment, gave but little inducement to their friends to place them there.

How changed now the scene! Then, confinement and severity were the great principles of treatment; and were carried into effect by methods, which, if pictured to the mental vision, could scarcely be comprehended. Now, freedom, kindness, sympathy, occupation, companionship, and amusements, are the great elements of treatment. How changed the results too! Then, an extremely small per centage recovered their reason; and they, probably, rather despite, than in consequence of the treatment. Now, a large majority speedily return to gladden the hearts of their friends, when they can be induced to send them early to suitable institutions. We of the present day can make estimates by figures of the change which has been wrought, and fancy indeed that we form a tolerable conception of it. But let us imagine if we can, what would have been the feelings of an intelligent man of those days, happily gone by forever, who had been accustomed to see the insane in their cells, raving under the aggravation of chains and confinement, or given up to despair from the absence of all sympathy, what, we say, would have been his feelings, if the veil that hides the future

could have been drawn aside, and there presented to his vision the interior and grounds of a well regulated Insane Asylum of the present day, with its numerous inmates receiving humane and kind treatment at the hands of the superintendent and keeepers, and pursuing various occupations and amusements; and eight or nine tenths rapidly recovering from the worst of human maladies. If one drop of philanthropic blood coursed through his veins, verily his rapture could not have been greater if the "crystal bar of Eden" had moved from before his eager eyes; and, if the doctrine of letting every body provide for himself and his own had taken possession of his nature, we suppose that the contemplation would have given a rebuke to him not lightly to be borne, and have even stirred his heart to a more kindly consideration for his fellow men.

This train of reflection has been suggested by the report of the Superintendent of this old Asylum, which furnishes in itself an almost complete history of insanity. Established under the Colonial Government, it was the recipient for the insane of an extended country; and even under the then mistaken plan of management, doubtless greatly meliorated their condition. During the revolution, the British soldiery wanting the house for a barracks turned loose its inmates to roam at large, and seek shelter and sustenance wherever their benighted intellects might carry them: an act more Vandal-like, if possible, than the burning of our capitol during the late war. In 1785 it was again refitted for its original purposes, and has continued to be used as an Insane Hospital ever since.

Owing to the circumstance of there being ample provision made by Virginia for all her insane, patients are never discharged from the Asylum that we are noticing except by recovery or death; and, consequently, during the long period of its existence, a great many old and incurable cases have accumulated. Up to the 1st of July, 1841, when the present Superintendent, Dr. John M. Galt, took charge of the institution, one hundred and nine patients, most of them of this

character, were in the Asylum. During the first six months following this, fourteen were admitted, eleven discharged, and fifteen died. Of the eleven discharged, nine were cured, and one so much improved that he soon after recovered. During the first year of the present Superintendent's management, thirteen recent cases were admitted; twelve of whom were cured and discharged by the end of the year 1842; and the remaining one died. This furnishes a per centage of 92.3 of recoveries from this class of cases; a larger proportion, we believe, than has ever been given by any other institution in our country. And indeed, as the one who died labored rather under delirium tremens than insanity, the Superintendent puts in a claim for excluding his case from the calculation; which would give 100 per cent. for the recoveries. We are not furnished with the necessary data by which we could ascertain the result of treatment in old cases.

An interesting feature, in the history of this old Asylum, is that the medical attendance upon it has descended from the grand-father to the father and the son. But it was not until the son came into office that the duties of physician and Superintendent were merged in the same individual, and the modern method of managing patients was adopted. The results have proved eminently successful and creditable to the young man, to whom this important trust has been committed; and we wish him a long, useful, and happy life.

G. W. B.

P. S. Since this article went to press we have discovered some errors in our calculations on page 115. The reader will please make the following corrections: 3d column of first table, for 21.5 read 22.5; 4th column, for 23.6 read 23.7. Second table, 3d column: for 9.5 read 9.9; 4th column, for 6.9 read 7.5; 6th column, for 46.8 read 48.9, and for 48.2 read 38.3; 7th column, for 7.3 read 7.4; for 49.1 read 44.6; 8th column, for 37.0 read 37.3. 16th line from bottom, for 40.7 read 46.4.

Selections from American and Foreign Journals.

Gun-shot Wound. Extensive laceration of the Brain, without loss of consciousness, or impairment of mind. By J. H. Thompson, M.D., of Salem, N. J.—*Monday, February 13th*, 1843. Mr. Wm. L. Johnson, ætat. 22, in attempting to shoot a bullock on his father's farm, which is about two miles from this town, was wounded by the bursting of the gun, a fragment of which struck him in the median line at the root of the nose. I saw him in about twenty-five minutes after the occurrence. The hemorrhage, which was said to have been profuse, had nearly ceased. At the moment of the accident he was prevented from falling by a person near him. He then walked into the house, a distance of about forty yards. I found him, although suffering agonizing pain, in the full possession of his mental faculties, which he had not indeed for a moment lost. Considerable tumefaction had occurred in the injured parts. The wound resulting from the accident commenced a little above the transverse suture, and extended directly down the middle of the nose. It was three quarters of an inch in length, by one quarter in breadth. The nasal bones were completely demolished, the frontal sinuses were laid open, and the upper turbinated bone was torn off. This much of the injury could be distinctly seen. The missile after entering had taken an oblique direction behind the right eye. Its ultimate course could not be accurately traced, owing to the extreme sensibility of the wounded parts; nor indeed was it deemed proper to persevere in the attempt, since it soon became evident that the foreign body had penetrated so deeply as to render it highly probable, that more injury than benefit would result from the search. The right eye protruded more than half an inch beyond its ordinary level. This protrusion was an immediate consequence of the accident, and therefore led to the supposition that the optic nerve was destroyed. The patient referred all his pain to

the right eye. The sensibility of this part was so acute, that the slightest touch—even a drop of water falling upon it, brought on spasmodic action of the whole muscular system, and rendered the dressing of the wound a task of great difficulty. Dr. Swing, an experienced practitioner, residing at Sharpstown in this county, was called in consultation with me, and continued to attend the case until its termination. Several loose fragments of bone were removed from the wound, and cold water dressings were applied. It is not necessary to enter further into the treatment than to say, that the strictest antiphlogistic plan was adopted and rigidly pursued. During the first and part of the second day, this amiable and unfortunate young gentleman retained the perfect possession of his senses. He answered all questions readily and with entire consistency—knew his friends—called repeatedly for different members of his family—made use of the most tender and endearing expressions towards them—in short, his mental faculties appeared to be unimpaired. There was no paralysis manifested until a few hours before death, when the *left arm* became motionless. Delirium came on, on Tuesday afternoon, and continued with short intervals until the termination of the case. Suppuration was speedily established; several considerable fragments presented themselves, and were removed. At the second dressing, a small quantity of cerebral substance issued from the wound. Death occurred on Friday morning, four days after the reception of the injury. Permission for a post-mortem examination was granted, on condition that we would make no incisions, nor in any way disfigure the body. We were therefore limited to a mere inspection of the wound. This is to be regretted, since it would have been interesting to have ascertained with precision, the *exact* nature and extent of the injury which had been inflicted. Tumefaction having subsided, the wound now presented a very different appearance. It measured one inch and a half in length, and an inch in breadth. A fissure commencing a little to the right of the median line, extended perpendicularly about two inches up the os frontis. As before mentioned, the frontal sinuses were opened; two or three considerable fragments of the internal table of the os frontis were depressed. The wound was filled with the softened substance of the brain, and with pieces of bone. As well as could be ascertained by the introduction of a finger, all the bones entering into the composition of the orbit, with the exception, perhaps, of those forming the anterior part of the floor, were broken up. The right eye was completely torn

loose from all its attachments to the posterior part of the orbit. Through a large opening formed by the fracture of the orbitar plates of the sphenoid and os frontis, the finger could be passed into the skull. As far as it could be reached in this way, the brain was in a pulpy condition. No foreign body could be detected. A probe, however, at length made it apparent. It proved to be the whole breech-pin of the gun. The large end, or that part which is screwed into the barrel, was over or upon the petrous portion of the temporal bone, the small end was near the opening which its passage had made in the bones of the orbit. The weight of this piece of iron (which is now in my possession) is two ounces; it is two inches and three quarters in length. Its extraction was attended with considerable difficulty. It could not in fact be removed until we had taken away, with strong forceps, the depressed portions of the os frontis.

Here was a most extensive laceration of the brain from a foreign body which remained imbedded in it, large fragments of bone were depressed, and in all probability spiculæ were driven into the cerebrum, yet none of the ordinary signs of such an injury were present. There was no loss of consciousness—no symptoms of compression—no paralysis until a few hours before death,—and until delirium came on as a consequence of inflammation of the brain, the operations of the mind were unimpaired. It is presumed that in so dreadful an injury as this, the case would necessarily be considered hopeless, although Larrey, Dupuytren, and indeed all sugeons relate instances of recovery after more or less extensive injury of the brain. There are upon record at least two examples of wounds from precisely the same cause as the one which came under my observation. The first is related by Dr. Rogers, (Vide *Am. Journal of Med. Sci.*, for 1828. The account is extracted from *Med. Chirurg. Trans*). In this case the breech-pin of the gun remained in the left hemisphere of the brain for twenty-seven days. The patient recovered with the loss of the sight of the left eye, and with his mental faculties unimpaired. In the second case both hemispheres were wounded to the depth of an inch and a half by the breech-pin of a gun, which struck the subject of the injury in the middle line of the frontal bone. (Vide *Am. Journal of Med. Sci.*, for 1830, where the account is taken from the *Edinburg Medical and Surgical Journal*). In this case also, the patient perfectly recovered "without the slightest alteration in mental power."—*American Journal.*

Electro-Magnetism a Remedy for Opium Poisoning. By E. E. Marcy, M.D., Hartford, July 3d, 1843.—A few weeks since I was called upon to visit the child of Mr. H. Poster, of this city, who had taken an over-dose of laudanum. On entering the room I found the child (eight months of age) in an apparently dying state. The pulse was almost entirely imperceptible at the wrist; respiration suspended, except at long intervals; pupils not contracting to the light; the extremities cold, and an entire insensibility to external impressions. From the history of the case it was ascertained that about two teaspoonsful of the narcotic had been administered by a girl with whom the child had been left in charge, some eight or ten hours previously, and during the absence of the mother.

From the apparent hopelessness of the case, I was deterred from making use of the ordinary means of resuscitation, being fully aware that the poison had entered the system, and was working its fatal effects on the brain, &c.

The respiration and circulation were nearly suspended, and unless some means could be taken to remove the death-like torpor of the brain, it was evident that these vital functions would cease to be executed. I therefore at once resolved to make use of a powerful electro-magnetic machine, hoping that I might arouse and maintain the action of the *brain* sufficient to keep up *respiration* and *circulation* until the effects of the laudanum should pass off.

First, a smart shock was passed through the head with no apparent effect—then six or eight were passed in rapid succession, when slight convulsive motions were perceived. By continuing the shocks at short intervals for thirty minutes, the child was restored sufficiently to open its eyes and take some notice of things when presented to him—the respiration had also been constantly improving, until it had now become natural—the pulse had also acquired strength and regularity, and the temperature of the body become natural.

The shocks were now discontinued for a time, when the stupor, with gasping respiration and thready pulse, &c., returned. The use of the machine again, like magic, restored the patient to life and consciousness.

The remedy was persevered in until the effects of the poison had passed off, and the child was restored to safety.

It must be borne in mind that opium destroys life by suspending for a time the function of the brain, and thus secondarily putting a stop to *respiration* and *circulation*, which are dependent on the brain for their action.

In all those cases, therefore, where the narcotic has been absorbed into the system, we believe the only sure way of proceeding is to make those applications which shall act directly in *arousing the action of the brain*, and thus keep in operation the vital organs which are dependent on it, until the stupor has disappeared. The most effectual agent for accomplishing this is, without doubt, the electro-magnetic machine.—*Boston Med. and Surg. Journ.*, July 12, 1843.

Fracture of the Pelvis—Laceration of the Bladder—Recovery.—A patient with the above accident recently fell under the care of Dr. Walker, of Charlestown. The patient was precipitated from a rail-road, with engine, cars, &c., into a river. On examination, crepitus was found to exist in the bones of the pelvis, following any attempt at motion of these parts. There was a tumor in right iliac region, extending from Poupart's ligament almost to umbilicus, and situated between peritoneum and abdominal muscles, excessively tender, and when handled followed by sickness and vomiting. The bladder was full at the time of the accident. A catheter, when introduced into the urethra, on passing under the arch of the pubes, turned to the right side, upwards and outwards, and having passed some distance in that direction discharged six ounces of bloody urine, which was coincident with the subsidence of the tumor. Pulse small, and at times almost imperceptible, attended with jactitation, cool skin and some sweating. Catheter was passed three times in twelve hours, with relief. Sense of tumor in pelvis, but no disposition to pass urine. To procure free exit and prevent distension from accumulation of urine, the bladder was opened much as in the operation for lithotomy, and constant evacuation maintained through orifice. From the time of the operation there was no more vomiting, and sickness soon ceased; the unfavorable symptoms disappeared, and perfect comfort ensued. No sloughing of parts about lacerated portion. The patient continued to do well, and on the 25th day consolidation of fractured bones had taken place, and he has since been able to go out.—*Ibid.*

Universal Suppuration of the Cerebro-spinal Membranes, without any corresponding symptoms. By Professor Wagner, of Vienna.—Jacob Eichinger, a soldier in the 4th Light In-

fantry Regiment, had enjoyed good health during the seven years that he had been in the service. On the 17th of November, 1839, he was suddenly attacked with symptoms of gastric derangement, which increased on the following day, and compelled him to go to bed, at about a quarter to twelve, A. M. He fell asleep, and awoke in an hour delirious. Convulsions soon supervened; the man became comatose, and, although the most active antiphlogistic treatment was had recourse to, he died on the following day, November 19th, at half-past four in the morning.

The body was examined on the 20th. The cranial bones were remarkably thin, and the right side of the skull somewhat prominent. The whole of the superior surface of the cerebral hemispheres was covered with a layer of yellow fluid pus, and appeared somewhat flattened; no trace of the arachnoid could be found at this part. The pia mater was highly congested, and infiltrated with pus in its prolongations between the convolutions; the substance of the hemispheres was very much softened, and contained numerous points of blood when cut through; the lateral ventricles empty, and their walls softened in the highest degree; the pineal gland was very much enlarged, and did not contain any calcareous matter. The inferior surface of the cerebrum, and the whole of the cerebellum, were covered with pus, and extremely soft: the arachnoid here also appeared to have been destroyed; the base of the cranium was bathed in pus; no fluid in the third or fourth ventricles; the pineal gland much injected. The inner surface of the trachea was of a light red color, but the bronchi was healthy. There were some adhesions between the pleuræ, and the substance of the lungs was much congested; a few tubercles in the upper part of the left lung. The heart was very large, soft, and loaded with fat, but not diseased. In the abdominal cavity nothing worthy of notice was found. The bladder contained about half a pint of turbid urine. The fibrous membrane of the spinal marrow was much injected, and the cellular membrane particularly so; its whole surface, and especially opposite the cauda equina, was bathed in the same kind of purulent matter as the brain; there was no trace of the serous membrane, and the substance of the spinal marrow itself was converted into a thin, pultacious matter.

Remarks.—This remarkable case is almost unique in the annals of medical science. Pathologists must decide whether the inflammation commenced in the arachnoid membrane, or extended to it from the softened nervous tissue, or whether

both states were simultaneously produced by one and the same cause. But, however this may be, we cannot but be struck with surprise that such extensive softening of the cerebro-spinal nervous mass, and universal suppuration of its serous membrane, should have existed without the production of any symptoms to indicate such extensive disease. Particular inquiries were made in the regiment in which the man had served, and it was ascertained that during the seven previous years he had enjoyed excellent health, having continued to do his duty as a soldier without interruption. It was only two days before his decease that gastric and convulsive symptoms made their appearance, and quickly terminated in coma and death.—*Prov. Med. Journ.*, Dec. 3. 1842.—*Ostr. Med. Woch.*, Nov. 4, 1842, from *Amer. Journ.*

Typhus Abdominalis.—Much new light has been lately thrown upon the pathology of this form of disease (typhus) by the researches and observations of Professor Rokitansky, and which have been made known to the profession in this country by my friends and colleagues in Vienna, Drs. Drysdale and Russell, in their valuable articles on the Pathology of Typhus, in the note to "Fletcher's Elements of General Pathology." From this we learn that "the Typhus process is characterized in an anatomical point of view by the deposition of a peculiar morbid product which forthwith undergoes a distinct series of peculiar changes. The seat of this process is various, and depends upon the specific relation of the general process to certain organs. The tissues most subject to this deposition are the mucous membrane and the lymphatic glands; and in Austria, at least, where the observations were made, the mucous membrane of the ileum (*ilio-typhus*) is most frequently affected, but it also occurs in the bronchia and lungs, (when in this seat constituting most probably the *exanthematic typhus*), and also, though very rarely, in the colon (*colo-typhus*)."

Let us examine its changes in the intestines—the most frequent seat of the process. First, the stage of congestion, corresponding to the period of irritation and catarrhal or gastric symptoms. "It exhibits a congested state of the vessels, or succulent condition of the mucous membrane, particularly of the villous coat extending over the greater part of the ileum, but better marked at particular spots—especially near the cœcum; the mesenteric glands are slightly swollen, their

vessels are gorged with blood, their substance soft and elastic, and their color dark.

"In the second stage (the stage of deposition of the morbid product, *i. e.* typhus infiltration, which is in respect to the degeneration its crude stage) the congested stage moderates to a certain degree, and is reduced to several spots corresponding to the Peyerian glands, and a few solitary follicles. Here it appears in the form of round elliptic '*plaques*,' varying from half a line to three lines in thickness, which are formed by the deposition of a peculiar substance in the Peyerian plexus and submucous cellular tissue. On a more close examination the degeneration is found to be so deposited in the submucous tissue of the follicles, that the deepest layer of that tissue, immediately covering the muscular coat, remains free from infiltration. It very seldom reaches beyond the bounds of the follicular apparatus.

"The mesenteric glands are now more swollen, so as to reach the size of a bean or hazel nut, blue, or grayish-red, tolerably consistent, and apparently infiltrated with lardaceous substance.

"The commencement of the the third stage (that of intumescence, softening nnd throwing off of the degeneration) is indicated by a return of the congestion in the ileum in a violent degree. The vessels, especially the veins, both in the mesentery and in their ramifications in the intestines, are gorged with dark-violet viscid blood, and the tissue of the mucous membrane presents again a swollen appearance, more especially in the villi, which yield a grayish-white turbid fluid on pressure.

"But the most remarkable change takes place in the *typhus-plaques* and mesenteric glands, which became spongy and turgescent. These changes may take place in either of the following ways. The deposit assumes the appearance of a grayish marrow-like substance, and is then, along with the covering of the mucous membrane adhering to it, converted into a dirty yellowish-brown eschar; which, shrinking together from all sides, gradually loosens itself at the margin, splits into various directions, breaks off from the deepest stratum of the submucous cellular tissue, and is carried off all at once, or by a repeated recurrence of the process; or the deposit degenerates into a loose, vascular, blood-streaked, bluish-red, luxuriant fungoid structure, which becomes a special source of profuse intestinal hemorrhages, and is generally thrown off piecemeal without scabbing.

"The mesenteric glands now reach their greatest volume, attaining the size of a pigeon's, and near the cœcal valve not unfrequently that of a hen's egg. Their substance is injected, tolerably consistent, but changes into a grayish-red, loose pulp, frequently presenting the appearance of evident extravasation of blood. It is then soft and elastic, or frequently gives rise to the sensation of fluctuation.

"In the fourth stage, after this deposition is thrown off, a loss of substance of the internal surface of the gut remains, which represents the proper typhus ulcer. It is unnecessary to go more into the detail or the appearance of these ulcers, which have been so frequently described and are so well known. At this stage the morbid product has been thrown off; the mesenteric glands diminish forthwith in volume by the removal of the infiltrated morbid matter, but they remain still somewhat larger than natural, and retain a reddish color and their increased vascularity.

"When the typhus process localizes itself in the bronchial mucous membrane, the phenomenon presents a considerable difference. It appears always in the form of a diffused intense congestion, with dark-colored swelling of the membrane, and copious secretion of a gelatinous, occasionally dark blood-streaked mucous, and is principally developed in the bronchial ramifications of the inferior lobe. It appears, therefore, in this situation to be always arrested in the stage of typhus congestion, and never comes to any manifest production of that morbid product in the tissue of the bronchial mucous membrane, which is produced in such abundance in the follicular apparatus of the intestinal mucous membrane in abdominal typhus. Thus in the primitive *broncho-typhus* the general affection is localized in the bronchial mucous membrane alone, to the exclusion of all the other mucous membranes, even that of the intestines, with which the typhus process in general has the greatest affinity. In many cases indeed the latter exhibits a recognizable, but always subordinate secondary affection of the follicles, in which the neighboring mesenteric glands participate; and it would often be difficult to recognise the affection as typhus, were it not for the other attendant changes which mark the disease—viz: the peculiar engorgement of the spleen and congestion of the pyloric extremity of the stomach, the condition of the blood, and the typhus nature of the affection in general, but more especially the change in the bronchial glands. This change is the same as that which the mesenteric glands undergo in the *ili-typhus*.

They are swollen to the size of a pigeon's or hen's egg, reddish blue, spongy, friable, soft, and infiltrated with the peculiar typhus product.

"This form is frequently combined with *pneumo-typhus* and typhus pleurisy, and it undoubtedly the pathological cause of the exanthematic contagious typhus, and most probably also of the Irish and North American typhus, which commonly run their course without abdominal affection.

"Sometimes the typhus affection of the lungs is better pronounced than that of the bronchia; but the former never occurs independently of the latter.

"Besides these primary seats of typhus deposition it may be deposited in many other organs as a secondary formation, giving rise to many complications, which, though very interesting in a practical point of view, would lead to too much detail were we to notice them here.

"Third. The typhus matter has, even at its origin, but much more in the transformations it undergoes, the greatest analogy with the cancerous degeneration, and more particularly with the medullary cancer.

"Fourth. The local typhus process is an inflammation, not however of a healthy character, but of a typhus character; and this unhealthiness is given, according to Rokitansky, by the peculiar diseased state of the blood. Lastly, Rokitansky is of opinion that when the local process is not met with in the mucous membrane of the intestines or in any other mucous membranes, it may have run its course in the blood without localizing itself at all."—"*Rokitansky's Handbuch der Pathologischen Anatomie.*"

A perusal of the foregoing remarks shows that its post-mortem appearances resemble very closely the Parisian form of the disease. The Viennese pathologists, however, consider it a dyscratic affection, depending enterely upon the formation and subsequent changes of the peculiar substance called "typhus matter," similar in nature to medullary-sarcoma.

Amer. Journ., from *Wilde's Austria.*

Case of Strangulated Intestine, from Rotation of the Sigmoid Flexure—with remarks.—By Jacob Bigelow, M.D. The Hon. Hugh S. Legare, Attorney-general of the United States, arrived in Boston on Friday, June 16th, and although fatigued by a hasty journey from Washington, was well enough to make calls on some friends in the evening. At 1

o'clock in the night he was seized with frequent abdominal pains, resembling those of colic, and called Dr. Thomas, of Washington, then lodging in the same hotel, to his assistance. During the remainder of the night, and the whole of the next day and night, he was affected with pains alternating with intervals of ease, without constitutional disturbance, and agreeing in character with those of previous attacks to which he had been liable for more than two years, the last occurring in March preceding. Various laxatives and enemata were resorted to, together with counter-irritants, but without removal of the constipation and pain.

Early on Sunday morning I was called to meet Dr. Thomas at Mr. L's lodgings at the Tremont House. I found him then suffering frequent paroxysms of pain, which he referred mostly to the lower abdomen, without distinction of side, but which sometimes mounted above the umbilicus. The pulse was at this time 60, the skin natural, with no tenderness on deep pressure of the abdomen in any part, no meteorism, no nausea. Opiates and other remedies were proposed to him, but declined, on the ground that laxatives and mechanical means had relieved his former attacks. During the morning two doses of Epsom salt, with infusion of senna and tincture of hyoscyamus were given, with frequent enemata both aqueous and stimulating, without effect. The pains did not increase, but a troublesome degree of tenesmus made it necessary to suspend the enemata. Elastic tubes were passed throughout the rectum, and water injected through them in the manner recommended by Dr. O'Beirne, but they could not be carried into the sigmoid flexure. His strength meanwhile remained good and his general condition stationary.

At 6 P. M. he was removed without difficulty to the house of a friend, where he was immediately put into a warm bath of 106 deg., from which he expressed great relief and satisfaction. He was then put to bed, and 60 drops of laudanum were administered in two doses. In about an hour, the relief not being perfect, 40 drops of Munn's elixir of opium were given, soon after which he fell into a quiet sleep, and so remained for about 3 hours. Conditional directions were given for repeating the opiate, but it was not found necessary till near morning, when he took 20 drops of the elixir and slept an hour or two more. On Monday morning at 5 o'clock, I found him more comfortable than before, skin temperate, pulse 64, abdomen not tender but beginning to be tympanitic. Castor oil and senna, with hyoscyamus, were now given and retained, and enemata, fomentations and sinapisms were re-

sumed as before. The pain did not return with the same severity as before, but meteorism rapidly increased, with restlessness and tenderness on pressure. At 9 A. M. the pulse was 80, and before 12 it was 100. The face of things having become very serious, Dr. Thomas being absent from the city, I requested further consultation, and Dr. Warren was called in. The abdomen was freely leeched and rubbed with croton oil. Various ineffectual attempts were made to overcome the obstruction of the intestine by the introduction of various tubes, by inflation of the rectum with a bellows, and by the tobacco injection administered twice. Under this last remedy he said he felt excited, was stronger but more agitated, and his pulse rose from 130 to 140, with increased force. Each injection contained half a drachm in infusion, and was retained nearly half an hour without narcotism or prostration. During the night the patient was restless, retaining his muscular strength in a considerable degree, and frequently getting up to the close stool in the belief of an approaching evacuation. There was never any vomiting nor nausea; the mind was clear, and the natural decisive tone of voice continued. He complained occasionally of a sense of burning at the epigastrium and upper abdomen. About half an hour before death he got up without assistance, and on lying down asked urgently for water. On receiving it, he pushed it away, saying it was filled with ants. A white paper was then shown him, to which he applied the same remark. On being told it was an illusion of sight, he put forth his hand for the glass, but missed it, said a few words incoherently,leaned back, and expired quietly at half past 5.

Autopsy seven hours after death.—Externally the limbs were very rigid, and there was much lividity about the head and back. The abdomen was greatly distended. On laying it open the cavity seemed nearly filled by the sigmoid flexure of the large intestine, which extended across the abdomen into the right hypochondrium, and was in a state of such distension, that its external circumference was in one place fifteen inches. It had a dusky green color, as if from commencing gangrene, but there seemed to be no softening, nor diminution of the natural polish. The two extremities of the flexture connected with the colon above, and rectum below, were felt to be twisted together about the mesentery as an axis, into a firm cord or neck, about an inch in diameter; and on being carefully untwisted, the whole included portion was found to have made four turns, or two entire revolutions upon itself. There was no line of demarcation between the heal-

thy and strangulated portions, nor was there any appearance externally of old disease about this part. The small intestine and the colon were moderately distended, but the rectum was rather contracted. The cavity of the peritoneum contained a small quantity of turbid reddish fluid, and in one place there was recent lymph upon the small intestine, but there were no other appearances of inflammation. Owing to the state of the body and the place of examination, the intestine was not opened, and no farther dissection made.

Remarks.—Internal strangulation, we have reason to believe, is a fatal disease except in rare instances in which a spontaneous restoration of the parts may under favorable circumstances have taken place. But the resources of art are for the most part unavailing, from our ignorance at the time, of the nature and place of the lesion, and from the inaccessible situation of the part, unless by a dangerous operation, not to be justified under any diagnosis which can be seasonably made out. Among the various causes known to have occasioned strangulation, the rotation or twisting of the intestine is less common than some others. Yet in addition to the case which has now been described, two others have occurred in this city, under the observation of Drs. Homans and J. B. S. Jackson, the record of which I have seen, in which fatal strangulation occurred from the torsion or twisting of the sigmoid flexure.

Professor Rokitansky, of Vienna, in a work on internal strangulations of the intestines, divides these lesions into three species. Of these, the second species consists in the rotation of one part round an axis most commonly formed by some other part. It appears to be the result of his experience that rotation round the mesentery as an axis can happen only to the small intestine.* But it appears from the case above detailed, and the two others alluded to, that the large intestine is capable of undergoing this rotation, and from its anatomical position, no part seems more exposed to this change of situation than the sigmoid flexure.

From remarks made by Mr. Legare during his illness, it is believed that in some of his former attacks of colic and constipation, relief was obtained by the introduction of the elastic tube beyond the seat of the stricture. This happy result is to be ascribed to the spasmodic character of the obstruction then existing. But when the intestine is rendered impervious by mechanical strangulation, it is evident that an

* Britsh and For. Med. Review, III. 496. 498.

instrument would sooner perforate the coats of the canal, than admit of being forced through the closed and tortuous passage. In the present case, tubes, some of which were two feet in length, were introduced into the rectum, and water injected through them continually to facilitate their progress. But the more flexible tubes were bent into a coil in the rectum, and the more rigid ones were irresistibly stopped at the sigmoid flexure, and could not be further forced without danger of perforating the intestine, an accident well known to have followed injudicious and violent efforts.—*Boston Med. and Surg. Journal.*

Medical Writers Good Practitioners.—We copy the following pleasant article from the *Boston Journal.* The unjust and illiberal notion which the writer combats is a very common one, and is encountered in the every-day walks of the physician. A still greater prejudice perhaps exists against the physician who cultivates some one or more of the natural sciences. The chemist, the botanist, or the mineralogist, seldom enjoys much patronage as a practitioner. To some extent there is a reason for it, as chemistry, botany, mineralogy and the kindred pursuits are so seductive, that he who becomes addicted to them is apt to *neglect* his professional avocations. But to the article:

An idea is prevalent in the world, and even fostered among medical men, perhaps from interested motives, that medical writers are not generally the best practitioners. The very reverse of this is more generally the fact. The nature of their researches obliges them to became familiar with the opinions and practice of the best practitioners, and to treasure them up with the most scrupulous attention. A store of useful and practical information is always at hand, which is ever ready to be applied to the cases under consideration and treatment. Writers, too, always provide themselves with large and respectable libraries for the purpose of investigating all the subjects on which they treat, as well as for the intrinsic value of the information they obtain from the perusal of them. Dr. Rush observes, "If a physician obtain skill by his own solitary experience, how much more will he acquire by availing himself of the experience of several hundred physicians,

which he can only obtain by availing himself of the opportunity of perusing a large medical library." And if it be true, which can admit of but little doubt, that a physician cannot accurately remember the details of his practice more than three years, of how much importance is it that he should be in the habit of recording all important facts and cases which may occur to his notice and observation, and be continually treasuring up fresh stores of knowledge by unwearied attention to books. A physician's studies are never finished till the close of life. I was always very much pleased with the following anecdote of Dr. Rush. "As two young physicians were once conversing in his presence, one of them said—'When I *finished* my studies.' When *you* finished *your* studies!' said the doctor, abruptly; 'why you must be a happy man to have finished your studies so young! I do not expect to finish *mine* while I live.' "

Notwithstanding the above observations, we have too much reason to believe that a great proportion of practising physicians in America do not devote much of their time and attention to study after they commence the practice of their profession; and it is from this mental idleness, as Dr. Rush observes, that "it is no uncommon thing for an old physician (from his neglect of books) to be more ignorant than he was when he commenced the practice of his profession."

Let it not be said that a physician has not time to record his experience or even to read. Some of the most extensive practitioners have been the most voluminous writers, and most industrious readers. In proof of this, we need only to mention the example of some of the fathers of our profession —such as Hippocrates, Galen, Celsus, Hoffman, Sydenham, Boerhaave, Van Swieten, Wistar, the Hunters, Monro, Cullen, and a host of others, almost all of whom were engaged in the most extensive and most lucrative practice, and were also authors of several most voluminous works. Dr. Good was one of our most elaborate writers. He has written several works, besides his great one on the practice of physic, yet the income of his practice was seven or eight thousand dollars a year. Sir Astley Cooper more than doubled the amount charged by Dr. Good in the same space of time; and yet, he was continually furnishing the world, through the medium of his writings, with the result of his knowledge and experience. Innumerable other examples in Europe might be mentioned of a similar nature. In fact, the best and most learned writers there, were altogether the best and most successful practitioners. Dr. Clark and Sir William Jones may be added

to this list. They never for a moment neglected the duties of their profession. Indeed they excelled in the practice of that profession, and they were among the most eminent in Europe, in science and literature.

Our own country, too, is rich in examples to prove that our best practitioners are, and ever have been, our ablest writers. Among our deceased medical men we need only mention the immortal names of Rush, Barton, Redman, Wistar, Dorsey, Dewees, Physick, Parish, Ramsay, Miller, Hosack, Godman, Eberle, Warren, Gorham, and numerous others, whose writings alone would fill a decent library. Among the living we take great pleasure in enumerating the names of Jackson, Warren, Bigelow, Hale, Ware, Hayward, Shattuck, Smith, Holmes, Woodward, and many others in Massachusetts; of Parsons, Senter and others, in Rhode Island; of Tully, Ives, Sumner and others, in Connecticut; of Mott, Beck, McNaughton, Reese, Paine, Lee, Forrey, the Smiths, Delafield, *cum multis aliis*, in New York; of the venerable and learned Coxe, Samuel Jackson, Hays, Gerhard, the McClellans, Horner, Gibson, Bache, Dunglison, Wood, Bell, and innumerable others, in Philadelphia; not forgetting the names of N. R. Smith, Annan, Sewall, and others, at the South; and Gross, Drake, Cartwright, Mussey, Hildreth and Kirtland, beyond the Alleghanies. Let no one accuse me of partiality in this enumeration. I am sensible that I have omitted the names of very many who have been equally successful with their pens, and in their practice. My object was not to give a list of our celebrated writers, for that would fill a sheet, but to mention a few which, without much reflection, presented themselves to my mind in illustration of the truth of the opinion that our ablest and most elaborate medical writers are also our *very best practitioners*. W. W.

January 8th, 1843.

Structure of Neuromatous Tumours in stumps.—Dr. Bennett exhibited to the Anatomical Society of Edinburgh, February 8, 1843, a neuromatous tumour about the size of a hazel nut, which had been removed from the stump of a patient of his by Mr. Spence. It had caused the individual great agony, which was entirely removed by the operation. On making a section through the tumour, it was found to be composed of a dense white substance, of cartilaginous consistence. Examined microscopically it was seen to be made

up of numerous bands of fibres, enclosing an amorphous structure. The bands were composed of from twenty to forty filaments crossing and recrossing each other, and terminating in loops. This filamentous structure differed in its arrangement from any other which Dr. Bennett had hitherto examined. About three-eighths of an inch of the nerve, to which the tumour was attached, had been removed with it, and this presented the same structure as that of the tumour. No remains of nervous tubes could anywhere be detected.

Mr. Spence considered that these tumours, on the ends of divided nerves, were not necessarily productive of pain in the stump. They existed on the cut extremities of nerves in every case, and only give rise to pain when exposed to pressure, when partially implicated in a firm cicatrix, or when thinly covered and thus exposed to the effects of atmospheric changes, or other external causes. When thickly covered by the soft parts it was seldom they gave rise to painful symptoms, though of large size. Mr. Spence, in support of these statements, exhibited a preparation of the nerves from a stump of the leg, where, although a neuromatous tumour existed on every nerve, the only one which had ever given rise to pain had been situated between the cicatrix and end of the fibula. He also showed several drawings of stumps which he had dissected, where the neuromata were very large, and yet had occasioned no pain.—*Lond. and Edin. Month. Journ. of Med. Sci.*, April, 1843, *Amer. Journ.*

Treatment of Pneumonia.—Some very interesting results have been obtained by Grisolle in reference to the influence of blood-letting on the progress of pneumonia from the first to the second stage; and as he advises blood-letting much in the same way as we do in this country, I may shortly notice his observations in order to contrast them with what he found to occur in cases treated by antimony alone. He bled forty-six cases in the first stage of the disease, and yet all, with the exception of ten, passed into the second. He treated forty-four cases with antimony alone, and they were not selected because improper for blood-letting, or because the disease was trivial, for in thirty-five it had already passed into the second stage, and one in seven of the whole number died. The effects of the antimony were much more strikingly beneficial than those of the blood-letting had been in the other cases. In those who recovered, the principal *symptoms* began to

amend on the first or second day for the most part, and the local signs continued to increase for several days only in a single instance, while in eighteen cases they began to improve at the end of the first day. That blood-letting should have been practised in some of these cases he admits, referring more especially to three of the six cases that died, in which he says that the circulation was unusually vigorous. We learn from these various researches, not that the one or other practice should be exclusively adopted, but that it is not necessary to repeat the blood-letting so often as the patient seems capable of bearing it—that much of the cure may be safely entrusted, in a great many cases that would still admit of depletion, to the antimony—and that, since antimony alone is evidently so potent a remedy, we have no reason to despair of ultimate recovery in cases that will not bear the evacuation of blood—a remark which can seldom be made of any other considerable inflammatory disease than pneumonia.—*Prof. Henderson, Lond. and Edin. Monthly Journal. Medical Examiner.*

Extract of a Lecture on Syphilis.—By Dr. Philip Ricord. It is, gentlemen, to meet some of the difficulties previously mentioned that I have determined, upon upon mature reflection, to dedicate one entire lecture to the most proper mode of investigating a case of syphilis, and to demonstrate to you the degree of confidence which may be placed in the assertions of patients.

But, before I enter upon this subject, I beg distinctly to state my most unqualified respect for those convictions, without which the very existence of constituted societies is at stake. For female virtue—that guardian of the honor of men—I have the deepest admiration; but recollect, gentlemen, it is not with homilies on chastity that a course of syphilis can be carried on; and although I conceive it to be obligatory on the physician in practice not to destroy those illusions on which, occasionally, the peace of a family may depend, but to palliate the painful truths which might cause the annihilation of individuals, yet I conceive it to be my duty, in this amphitheatre, to raise the curtain, because science must not be made to consist of the delusions of love-sick youths, but of all the elements of truth which can be collected by manly and searching intellects.

Every day, gentlemen, persons affected with syphilis deny the possibility of the fact, from their knowledge of the "respectability" of the lady who has honored them with her favours. Let us, therefore, examine what conditions can place a woman above suspicion.

Is it the fact of her being free from the sacred bonds of matrimony? This question I shall answer with an anecdote borrowed from Dupuytren's practice. That great surgeon performed suture on a lady in whom the perineum had been torn during parturition. A couple of years afterwards a friend and patient requested the professor to visit his young wife, with whom the happy bridegroom had been unable to effect complete intercourse. Dupuytren, to his great surprise, recognised in the "too perfect" maid the lady whom he had previously attended, and found he had been himself the involuntary cause of the deluded husband's ill success; the sutures had, in fact, caused the partial obliteration of the genital organs. He remedied the injury, and, of course, was discreet.

In consequence of the brutal and stupid superstition prevalent amongst the lower orders, that connection with a "real maiden" is the only effectual way of removing inconvenient syphilitic symptoms, I have myself seen a little girl, not eighteen months old, with chancres and buboes.

A man servant called on me not long since, laboring under gonorrhœa. His first statement was, that six months had elapsed since the last sexual intercourse. On being hard pressed with questions, he admitted that, being about to be married (two banns had been already proclaimed), he had considered himself justified in levying a tythe on his future rights. I examined the "blushing bride," and after much difficulty, she acknowledged that violence had been lately used towards her by another person; but, added she, to a certainty he was not diseased, for if he had been, she would positively have resented his rudeness by "raising the house." I need not tell you, Gentlemen, the third bann never was published.

Two physicians, beside myself, attended a young gentleman with constitutional syphilis. He mentioned having had intercourse with two women of suspicious character, whom the medical attendants examined separately, and found healthy. A month elapsed, and I at last discovered the real cause of this gentleman's amorous misfortunes to lie with a *married* lady of unblemished repute and high station, who had sent for me, not in my medical capacity, for she did not ima-

gine herself infected, but to secure my attentions for the young gentleman above mentioned, whose disorderly conduct gave her no small uneasiness.

Who has not heard the famous history of Sidrac, who was presented with chancres in return for his first visit to the connubial bed. "It is true," says Voltaire, "it was a family complaint."

I must say, gentlemen, it is my conviction, more syphilis has its origin beyond the pale of prostitution than within it. But, even in Paris, what degree of security can public health derive from the medical examination of prostitutes once a week, or of unlicensed women once a fortnight, when we know *three days* to be amply sufficient for a sore to be communicated, and rendered inoculable, when we know from *our own* experience that infected women send to the physician in their stead one who does not fear inspection, and who thus brings home to them a stamped and signed permission to inflict on the unguarded and the imprudent the most horrible disease with which Providence has been pleased to chastise mankind!

The "profession" of syphilitic patients is occasionally brought forward as an unanswerable proof of the spontaneous development of the disease, or at least as sufficient evidence of contamination, without the participation of the patient. Now, notwithstanding my profound and sincere respect for religious institutions, I conceive it would be offering an insult to your better judgment, were I to propose to you seriously, as Fallopia does in a satirical mood, in explanation of venereal symptoms observed in a community of nuns, "the promiscuous use of holy water!"

My colleague, Dr. Serres, one of the most learned and distinguished members of the Academy of Sciences, Paris, was called in to attend a young lady who was troubled with hæmorrhoids. These turned out to be *bona fide* "chancres." The Doctor could not credit the evidence of his senses; he held a private conference with the young lady's mother, and, to his utter dismay and confusion, found her infected also, but in a manner more consonant with general custom. Further investigation showed that a *reverend* adviser of this interesting family had extended his attentions to both mother and daughter, and had left after him most painful marks of his kindness.

In the investigation of patients, physicians are often exposed to infection. I will select one out of many well authenticated instances. Our late lamented colleague, Dr. Hour-

mann, of the Hopital de l'Ourcine, in examining a syphilitic woman, inoculated a chancre on his finger. Secondary and tertiary symptoms were the consequence, and after ten months the disease terminated fatally.

This, however, is far from being the most frequent mode in which professional persons are diseased. A midwife with a papular and scaly eruption, was lately considered by Dr. Casenave as an instance of infection by *simple absorption* from the finger; she, of course encouraged the belief. On being cross-examined by myself, she acknowledged, with tears, that one single, never-since-repeated breach of her marriage articles had been visited on her thus severely, and that she would take good care to be perfectly faithful for the future to her lord and master.

When all these circumstances are reflected upon—when it is recollected that illicit and disgusting practices, too common in highly civilized countries, often produce primary sores of the anus, mouth, &c.—that a sense of shame will compel such patients to conceal the disgraceful truth, unless the avowal be actually wrung from them by the fear of consequences—can it be wondered at if the true origin of many cases of syphilis remains shrouded in doubt?—but is that origin, therefore, to be denied?

A class of females to which we are all, more or less, indebted—nurses—often lay upon their unconscious suckling the blame which more properly rests with older offenders. I have had under my care an infected nurse, who threw the entire onus upon an innocent baby, although she had taken, at the same time, "to nurse," an unlimited number of bold dragoons. A few days since a patient left our wards, cured of constitutional symptoms; his wife had communicated to him an indurated chancre some five months before. Here, again, a child she had nursed three years previously was made the scapegoat, and the poor husband never once reflected he had been living in the dangerous vicinity of a garrisoned town.

In the examination of syphilitic patients, we must not, gentlemen, lose sight of the disease previous to the present one—of the period at which the present symptoms may have arrived—nor of the possibility of total disppearance of former accidents. You must not forget that a phymosis may conceal the primary sores; that they may lurk within the folds of the vagina, or even be engrafted on the os uteri itself. This last remark leads us to our concluding observation, that all syphilitic cases in women, where the use of the speculum has

been neglected, shall be for us as though they never were recorded.—*Medical Examiner*, from *Prov. Med. Journ.*

A Curiosity in Obstetric Physiology.—By John H. Griscom, M.D., one of the Physicians of the New York Hospital.—In the month of October, 1841, I was consulted by Mrs. R. M. H., for a hæmorrhagic discharge from the vagina, she being pregnant, as she believed, about seven months. This discharge had existed about five months, mostly every day, but sometimes ceasing for a while; but latterly it had become more steady. She described it as apparently not pure blood, but a mixture of blood and water, or very thin blood, of a bright color, and never coagulated. She had felt the motions of the fœtus with considerable distinctness, until within a month, since when they had diminished in strength and frequency, and for the last few days had totally ceased. Her general health (except some muscular pains, and some difficulty in moving about actively). and her appetite, were excellent. She was bled on the 16th, the blood being unusually black. The operation enlivened her much, and she thought she felt some movement of the fœtus, but too indistinct to be certain of it. An examination of the abdomen, in the sitting posture, developed a general enlargement which was quite soft, with none of the uniform and peculiar firmness of the healthy impregnated uterus of that period. Midway between the umbilicus and pubis, the fingers could be pressed back nearly to the prominence of the sacrum. When this was done, there were distinct traces of a tumor, occupying the right iliac fossa, of an elongated form, and very tender to the touch, and a smaller tumor at the left side of the median line. The upper edges of both were distinctly perceived by the hand when pressed gently between them. There was no requirement for any interference until the 24th, when the husband came to me and said he believed she was in labor. I found her sitting up, and having what seemed very much like labor pains, every few minutes. These ceased in a few hours, but recurred slightly the following day. On the 26th she went to bed, complaining of severe pain in the abdomen generally, greatly increasing at short intervals, but not subsiding entirely at the intermissions.

An examination, per vaginam, was now made, and a firm round tumor was perceived, giving the distinct impression of a fœtal head felt through the parietes of the uterus. It was

movable, as is ordinary in pregnancy, and motion was communicable through it to the abdomen.

The abdomen now became very tender to the touch, especially over the right tumor; the pulse rose to one hundred and thirty, and the tongue became coated; and though both tongue and skin remained moist, the tenderness of the abdomen soon became so excessive, that peritonitis appeared severely developed. The hæmorrhage from the vagina now disappeared, and did not recur. Active antiphlogistic treatment was adopted; and each successive effort produced a subsidence of the symptoms, but for a few minutes only. The flame would suddenly light up again, after a short period of ease to the patient, and of hope to the attendants, and burn with increased intensity, until, at the end of the week, she sank calmly in death.

When confined to the bed, Mrs. H. first informed me that she had *always* doubted her being pregnant, though she had had many of the usual symptoms, such as enlargement of the mammæ. with exudation of their milk, motions of fœtus, etc.; but the latter were often so obscure, as to lead her to hesitate between them and borborygmi.

Autopsia in company with Drs. Boyd, Swett, and S. T. Smith.—The interior abdomen presented the usual appearances of inflammation of the peritoneum and intestines, with great vascular injection of the omentum, and loss of its substance; and among the folds of the bowels and through the cellular tissue, there was a larger tumor, of a blue color, and towards the left was the uterus, about the size of that organ in the second month of pregnancy. Extensive recent adhesions existed between the bowels and the tumor, and in separating them, several ulcerated holes were discovered in the membrane covering the tumor.

The tumor was found to dip down into the pelvic cavity, and was subsequently observed to occupy its entire extent. The contents of the pelvis were removed and laid upon a platter for closer inspection. The uterus was first opened longitudinally; it was very healthy looking, except in size, and was entirely void of anything like a fœtus. It contained a small quantity of mucus, and its inner surface was copiously dotted with red points. The left fallopian tube and ovary were sound, as was also the right tube. The latter was traversed with some difficulty by means of bristles, up to the fimbriated extremities, which terminated against the tumor, the latter being in fact the right ovarium, developed to the size of a large cocoa nut. This was opened longitudinally,

and immediately there was brought to view a perfectly formed fœtus, of about six months, placenta and all complete. The child appeared to have been dead a considerable time; it was very soft, and the placenta was partially converted into purulent looking matter, similar to that found in the peritoneal cavity. It had escaped through the openings before noticed. The ovarium, as now seen, consisted of a large sac, of a mingled muscular and membranous texture, about as thick as a silver dollar, and was irregularly divided into three or four large cells by membranous partitions. The fœtal head presented towards the vagina.—*N. Y. Journ. of Med.*

Structure of the Uterus.—Jobert conceives that the peritoneum is united to the surface of the uterus by true muscular fibres; and that the uterus consists of a single muscle, whose fibres, arranged in super-imposed layers, run in the following directions:

1. The superficial longitudinal fibres, which may be called *median*, as they occupy the central raphé of the body of the uterus, rarely exist on its anterior surface; they are constantly found on its posterior aspect, where they consist of two thin super-imposed layers, commencing at the fundus of the uterus, and running to the uterine extremity of the vagina, to which they are attached, with the exception of a few which terminate on the neck of the uterus above the opening of the vagina. They adhere on the one hand to the peritoneum, on the other to the oblique fibres.

The superficial fibres of the anterior wall of the uterus form a layer covered by the peritoneum and lying on the deep fibres; they are so disposed that they do not embrace the entire surface of the wall of the uterus which they concur in forming, but they cross, before they reach the round ligament of the opposite side. Some of its fibres enter into the composition of the round ligament, while others pass behind it and terminate on the sides of the organ where they decussate with those from the posterior surface.

3. The remaining superficial fibres appertain to the tubes and to the ligaments of the ovaries: they are only apparent during pregnancy. Some arise from the fundus of the uterus, adhere to those which belong to the tubes, and run to the anterior part of the ligament of the ovaries, being slightly twisted on themselves; others more numerous, at first diver-

gent, arise from the posterior surface of the fundus of the uterus, and also run to the ligament of the ovary. Finally, some transverse fibres, arising from the posterior surface, constitute the inferior portion of the organ.

The neck of the uterus is composed of the same tissue as the body. The fibres composing it represent semicircles, and decussate without intermixing in the direction of the commissures. This semi-annular arrangement is more evident when the female has borne children, and when the orifice of the uterus is transverse. Are the fibres of the neck of the uterus confounded with those of the vagina? Jobert thinks they are.—*Amer. Journ.*, from *Lond. and Edin. Month. Journ. Med. Sci.*, April, 1843.

Ferruginated Pill of Mercury. By G. F. Collier, M.D.—The varying and unsatisfactory quality of our "blue-pill" has for many years attracted attention. In my second edition of the "London Pharmacopœia" I gave the outline of a formula for preparing it with sesquioxide of iron; the further experience of years enables me to offer this preparation to the profession as a boon to them and to the public, for it may be proved that the iron enters along with the mercury into the blood, and saves the wear and tear of the human body under its use. I will not, at this time canvass, because I doubt, the probability of the sesquioxide (in double equivalents) yielding up one atom of its oxygen to the mercury, as is the opinion of several chemists to whom I have submitted this compound. I am aware that other peroxides, when moist, will similarly combine and divide mercurial globules; and I will not now enter upon the series of incomplete experiments instituted by myself to prove that mercury will amalgamate with other metallic oxides, and in this state form double or triple salts with acids. I shall now keep only to the practical utility of my compound, and to its importance as a great remedial improvement.

In the spirit of a pharmaceutical chemist I should either exclusively manufacture and sell it over my own counter, or I should take out a patent for it; in that of a manufacturing chemist I should do the like, or keep it a secret and save a fortune by it; were I of the new school of "summi auctores" I should throw the mere shadow of it, chemical, mesmerical, magnetical, and homœopathical, into a modest pamphlet, proving that the era of medicine truly commenced in 1843,

and that up to that time all were shadows, clouds, and darkness. I shall content myself with publishing the recipe, and recording a brief statement of my experience.

℞.—Ferri sesquioxydi, ʒi;
Hydrargyri, ʒij;
Confect. rosæ Gallicæ, ʒiij. Contere donec globuli non amplius conspiciantur.

It is made in five minutes; common blue-pill demands a week. The globules are not visible, even by the microscope. It is uniform in its appearance and effects. It makes a smoother pill, retaining its form more permanently. It salivates in a few days in the usual doses. The presence of the iron prevents the wear and tear of the human body under the effects of the mercury. It is particularly eligible for the strumous, the irritable, and for reduced anemial constitutions requiring mercury. The powers of life are not so much (scarcely at all) prostrated under its use. Its resolvent power is greater than that of mercury alone, especially with respect to buboes. Practitioners will at all events know what they are using; at present they have for blue-pill all manner of alloys and sulphurets,—murcurial-zinc pill, mercurial-sulphur pill, &c., &c., &c.

Five grains of sesquioxide will suffice to amalgamate and divide a large quantity of mercury, but I propose the larger proportion as a remedy.—*Lancet*, March 11, 1843.

Indications afforded by the state of the Iris in cases of Cerebral Lesion.—In the examination of cases of injury to the brain it is extremely important for you to enter minutely into all those signs which indicate any injury to the brain. First, the mental condition; next, the state of the pupils—the iris is placed before that expanded surface of the optic nerve, the retina, as an intelligent curtain to guard it from injury. The vital contrivances by which it acts, and by which its action is directed, are so beautifully perfect that the extent of the opening of the curtain is indicative of the state of the nervous apparatus it is destined to protect, by preventing such an amount of light impinging upon it as would be liable to injure it. In disease of the globe of the eye the dilated pupil indicates more or less pressure on the retina by some cause in the globe itself, such as a permanently turgid choroid, &c.

But if with a healthy eye, in connection with a blow on the head, we find a dilated pupil, then we have the sign of some pressure or injury to the nerve in its course within the skull, or the ganglia in which it terminates.

The dilated pupil, then, indicates very serious injury to the optic nerve, or the nervous centres with which it is connected, though it may happen, as in the case of very severe concussion, the injury is remediable. The contracted pupil, on the contrary, indicates an irritability of the nervous instruments, and undue excitement of their natural function—not an obliteration of it. You will sometimes see, in the case of injury of the brain, dilatation of one pupil and contraction of the other; where this is the case you will find the most severe injury of the brain on the side opposite the dilated pupil. I have several facts to prove this assertion, which I shall relate on a future occasion.—*Medical Gazette, Mr. Solly's Clinical Lecture: Medical Examiner.*

THE WESTERN JOURNAL.

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LOUISVILLE, AUGUST 1, 1843.

TRAVELLING EDITORIALS.

Voyage up the Mississippi.

He who would enjoy the ascending voyage on this river, should embark at New Orleans in the month of June, when the river is in its glory, and its banks are concealed beneath leaves more numerous than the sands of its waters. At this stage, the steamer moves fearlessly over her great enemy, the sawyer, and has as little dread of shoals and sand bars; all of which lie quiet and harmless, in the depths of the mighty flood. But greater safety is not the only advantage. There is a physical pleasure in coming every hour to a higher level and a higher latitude, which conspire to give a cooler and fresher climate. Still further, the perception of rapid progress against such an impetuous torrent, raises ones race in his estimation, and sets him to speculating on the future conquests of man over the elements, before which, in a state of nature, he is so powerless. Further still, the geologist sees the turbid waters overflowing the banks to deposit, on the adjoining plains, the alluvion which has not yet been raised high enough to confine the stream within its borders;

while the physician beholds in the same phenomenon the conditions originating the fevers which, after the subsidence of the freshet, invade the inhabitants of the great valley Finally, at such a season the Father of Waters is not in *dishabille*, but his sunken trees, and crumbling banks, and desolate bars overspread with the decaying wreck of the forest, are nearly all concealed, and little arrests the eye, but trees and water—a mighty river sweeping through a lofty and boundless wood; of which the rivulet meandering in the meadow is a microscopic picture. On the whole, these views are monotonous but not tiresome, similar but not identical. In some places the gigantic cotton trees range up to the water's edge; in others, the eye reaches them over three or four green terraces, rising in soft beauty from the surface of the stream. Below the latitude of 33° their branches are gloomily decorated with dark silvery Spanish moss; above, the trunks are encircled with rhus and ampylopsis, like the columns of a mighty temple, festooned with wreaths of evergreen. But in the midst of uniformity the bayous give great and pleasing variety. Every now and then the voyager is surprised to find himself, as if by magic, suddenly translated from the broad surface of the eddying river, to a narrow and winding canal, into which the lower limbs of the trees dip their leaves; while the upper cast a refreshing shade over the hurricane deck, on which, if a lover of nature, he will spend much of his time, and where, as the pleasantest spot we can select for him this sultry afternoon, we shall leave him to lounge, and look at what we have not described.

The Influenza.

From what we can see and hear, this new visitation of epidemic catarrh is extensively felt over the "Ohio countries." As in the case of epidemic cholera, appearing first in the larger towns, it subsequently invades even the most thinly peopled portions of the country. The newspapers inform us of its simultaneous existence in Europe and on the Atlantic ocean. In the United States it has manifestly spread from east to west, as did the cholera before it. Indeed the laws of diffusion of the remote causes of these two epidemics, appear to be the same; and they agree pathologically in one point, that of attacking chiefly the mucous membranes, one the respiratory, the other the digestive. The effects of the reigning influenza are not however limited to the pulmonary and facial mucous membrane;

for in a great number of cases the gastro-intestinal has been and is the seat of irritation, giving rise to cholera morbus, cholera infantum, diarrhœa, and dysentery. It must, however, be borne in mind, that these maladies prevail annually in July, and would no doubt occur to a greater or less extent if the influenza did not prevail at this time. Nevertheless, the causes of the whole are in concurrent operation, so that their symptoms in many cases are mixed up, or appear in succession. The present influenza, considered apart from its accomplices, is not as violent as some which have preceded it; and occurring at midsummer, is not so likely to leave serious lesions of the lungs behind it, as when it occurs in autumn, winter, and spring.

We shall fill out this jejune editorial with an extract from the private letter of a respected medical gentleman, dated Detroit, Michigan, April 15, 1843.

"I am looking for an epidemic summer. Notwithstanding M. Arago's opinions with regard to the influence of comets, I am still persuaded of the truth of Webster's remarks. My own experience, though necessarily so limited, fully bears him out. If a comet is to influence us, I take it that as a necessary condition, it must either be so large or so near as to be distinctly visible to the naked eye. Such comets, I believe, have always been accompanied with earthquakes, irruptions of volcanoes, and severe seasons of epidemics; I mean to those nearest the meteor's perihelion. The first we have had, the last I certainly look for. Analogy would teach, that their influence (epidemic) would diminish with the square of their distance, or the cube of their matter. Arago's two comets a year, are too small and too distant to have any effect. We might as well expect cometary influence from those bodies dispersed through space, as to look for such when the meteor is invisible."

The occurrence in summer, after an earthquake in winter and a comet in spring, of a wide spreading epidemic, dependent on no known or even conjectural terrestial or atmospheric cause, certainly gives support to the speculation of our correspondent. He may almost be said to have predicted the present epidemic. We hope our readers in the different parts of the Mississippi valley, will note accurately the time of its invasion, its symptoms and complications, that we may have its chronology and pathology, should its ætiological history still remain unwritten.

Reported Yellow Fever in Pittsburg.

An esteemed correspondent of the neighborhood of Pittsburg, informs us that a report has reached him of two cases of yellow fever in that city. If they have occurred, the patients had no doubt contracted the disease in New Orleans. We refer to the rumor only to say, that the question of the contagiousness of yellow fever will probably be answered in the valley of the Mississippi. The rapidity with which steamboats ascend into the interior from that city, cannot fail to introduce the disease into many of our commercial towns, *if it be contagious.*

Progress of Mesmerism.

We have cut the following important annunciation from the Cincinnati Daily Gazette of the 27th ult:

"*Animal Magnetism.*—Dr. S. Underhill, of Cleveland, Ohio, late Professor of Chemistry, who was appointed in 1839 by the State Medical Society, one of a committee of three, to investigate the above subject, and who has devoted much of his time, since that appointment, to the subject, has arrived in this city and intends to deliver lectures and make demonstrations on this and on Phrenology. He claims much experience in the use of Magnetism as a curative agent. He has with him, at the "Mansion House," a somnambulist, whose ability to find and point out the seat, character, and sympathetic effects of any disease however mysterious, have been fully tested and have never failed in a single instance. During the last three months physicians have daily taken notes of her examinations, and in no case has she made a failure. Her prescriptions are most appropriate for the disease described. Price for examination and prescription two dollars. Always private; none present except the physician, wife, husband or parents of the patient.

"Of the when and where lectures will be delivered, due notice will be given."

It appears from this advertisement that Dr. Underhill is a physician of the largest city in the north of Ohio, a professor of chemistry, and a member of a committee of three, selected and appointed by our brethren in Ohio to investigate the subject of animal magnetism. He is then not an unbidden, or "come by chance" member of the Mesmeric family, but a legitimate and commissioned operator, whom we may venture to "touch without tongs," though perhaps not without being soiled either by the contact or by having "mud thrown upon us," by the good gentlemen (bless their souls)! who are desirous of paying "two dollars" to a pretty young girl for looking into them.

What a pity it is that the Doctor cannot bestow *clairvoyance* on himself, for he would then pocket the whole fee (though perhaps he prefers half for the sake of such an interesting travelling companion), and would, moreover, have the pleasure of seeing many exciting sights, while a certain class of patients would doubtless derive a pleasure from his inspection, which they cannot from that of one of their own sex. The perfection of the arrangement would be for the Doctor and his fair partner in the practice both to inspect, dividing the applicants between them; thus gratifying their own philosophical curiosity, while they afforded to their patients the satisfaction of being inspected by one of the other sex from themselves. Thus methodized, the Mesmeric practice of physic could not fail to become exceedingly popular. Moreover, by dividing the sexes between them, each would soon become more *au fait* than could otherwise happen. The Doctor could decide, at a glance, on the state of the *ovaria*, count the number of *corpora lutea*, detect obstructions in the *tubuli Fallopianæ*, spy out the *embryo* in its first "swaddling clothes," and distinguish *leucorrhœa* from every other discharge; while his fair assistant would as infallably diagnosticate *gonorrhœa* from *gleet*, organic from spasmodic *strictures*, and *sarcocele* from every other tumour, without any indecent exposure in her presence, or any befouling of her delicate hands. Thus practised, medicine would become a delicious occupation, bringing its own reward, even without the "two dollars"—while half the affliction from the disease would be swallowed up, in the pleasure of being looked into by one of the other sex.

But what is to become of our medical schools under this mighty discovery? We fear that our professors, like the handicraft artists of Europe, when labor-saving machinery was first introduced, will rise *en masse*, and break it down. What a pity that the public spirited citizens of Louisville expended a hundred thousand dollars to endow our medical institute, when such a brilliant invention for the practice of physic was almost peeping above the horizon. Had they waited only a few years, they might have saved their money for some *necessary* work of benevolence. We would advise our *alumni* and all other young doctors to toil no more over their books, but go to Mesmerizing the young ladies of their neighborhood, and as soon as they find one who is "impressible," to marry and commence the new practice. It will be every way pleasanter to ride about the country with

a chatty little wife, whose *clairvoyance*, physical and *intellectual*, will penetrate all obscurities in diagnosis, pathology and therapeutics, than to trudge alone to the house of a patient, and then prescribe perhaps in hesitancy and error.

In conclusion, we protest against being claimed as an implicit and unconditional believer in Mesmerism, because we have commended *one* of its applications. We believe largely, it is true, and our mental *clairvoyance* is on the increase, but it may be sometime before we perceive as good evidence for some of the other Mesmeric achievements as for that which we have made known to our readers.

P. S. Having spoken of self Mesmerization, we may cite a fact to show its reality. In Cincinnati a lad was so impressible, that he could readily throw himself into a somnambulic state. This he did in presence of a committee of highly respectable gentlemen, two of whom assured us of the fact. Having remained for some time in that condition, the question arose, how he should be brought out of it. After considerable deliberation it was resolved that two of their body should take hold of his arms and make the reverse or disenchanting passes. As his arms were stiff, this proved to be rather an awkward movement, and in the midst of it, he pushed them away exclaiming: "get along, you don't know nothing about it, I can do much better myself;" and waving his hands *secundum artem* a few times, was wide awake! This discovery in Mesmerism seems especially adapted to the practice of physic, and will no doubt soon be applied. The physician, on the present plan, when he takes his seat at the bed side of the patient, is obliged to keep awake, a pretty difficult matter if the thermometer be as it now is above 90°, but on the improved plan, he has only to sit down and throw himself into a Mesmeric slumber, when he will infallibly see what is and what should be; after which he may by the reverse passes wake himself up, and proceed to execute. But one step more is necessary. To proceed from self to reciprocal Mesmerization. Thus, as in the case of Dr. U., where a man and woman operate in connexion, if they were able mutually to impregnate each other with the influence which begets knowledge and science, not less than corporeal *clairvoyance*, they might explore in conjunction what we once heard an old professional brother call the "secret arcanas" of the patients structure, and by comparing their observations come to a more infallible conclusion than if acting separately. The obvious pleasures

and advantages of this method, lead us respectfully to suggest to our Mesmeric societies the propriety of offering a premium to the man who might discover a process of reciprocal Mesmerization; and to aid in the momentous inquiry, we would direct the attention of competitors for the prize to certain worms, or other small animals, which are said to carry on reciprocal impregnation. But lest our *postcript* should exceed the length of the text to which it is appended, we must, for the present, dismiss this fascinating subject. D.

Scioto Valley, Ohio, July 25, 1843.

THE INFLUENZA.

This affection, which has prevailed to the North and East, made its appearance in this city and neighborhood about the 1st of July. Out of the entire population of the city, we presume scarce a family escaped it. The milder cases were attended by slight soreness of the fauces, nasal passages, and chest, with occasional cough. In the graver cases, these symptoms were heightened, and accompanied by severer and general muscular or articular pains, great lassitude, and considerable arterial excitement. In a third variety, the mucous membranes generally seemed to be involved: in many instances there was great irritation of the alimentary canal, with mucous, serous, and sometimes bloody discharges. On the whole, however, considering the number attacked, we may say the epidemic was mild. For the most part, rest for a few days, and an occasional laxative, were entirely sufficient for the cure. A few cases required a more vigorous treatment—as detraction of blood and other antiphlogistic remedies.

The epidemic has now quite disappeared. We learn from the public prints that it is prevailing in St. Louis and New Orleans, and in all the intermediate towns. C.

DEATH OF JUDGE ROWAN.

It is with no common degree of pain that we announce the demise of our venerable fellow-citizen, the Hon. John Rowan. He fell a victim to the prevailing epidemic, on the 13th inst., after an illness of two days. Judge Rowan was one of the founders of the Medical School of this city, and had presided over the institution from its origin.

This, of course, is not the place to speak of the virtues and the mer-

its of the deceased; but we may be allowed to copy, from the proceedings of the Louisville Chancery Court, the following paragraph—part of a feeling tribute paid to his memory by those who had known him long and known him well.

"The deceased was born in Pennsylvania, and was brought to this country, with his father's family, when a small boy. He grew up with the State, and, at an early age, participated in her councils. He was a member of the Convention which formed the constitution of 1799; he was Secretary of State in 1804; he was elected to Congress from a district in which he did not reside in 1806; he was a member of the General Assembly many years; he was appointed Judge of the Court of Appeals in 1819; and, in 1824, he was elected to the Senate of the United States. The last public office he filled was that of commissioner for carrying out the late treaty with Mexico. He was a man of great literary acquirements—of full and varied information, and splendid eloquence. His genius was rich in original thought, beaming and striking, and, when called forth by a great subject, the boldness and sublimity of his conceptions were astonishing.

"His talents and learning made him the ornament of the bar; and he was, in all his intercourse, as full an exemplar of all that makes the bearing of a gentleman as any man who ever appeared in our courts."

C.

GROSS ON WOUNDS OF THE INTESTINES AND ARTIFICIAL ANUS.

The paper on *Wounds of the Intestines*, published in the January, February, and March numbers of our last volume, and that on *Artificial Anus* contained in the Journal for July, have just been issued together, by Messrs. Prentice and Weissinger, in a volume of two hundred and twenty pages, octavo, with a colored lithograph illustrative of the first memoir. Our opinion of these articles has already been expressed. The first-named memoir is the result of about two years hard labor on the part of one who does things thoroughly. The memoir on Artificial Anus embodies a mass of information to be found nowhere else in the language. No volume of the same size, containing matter of a higher and more valuable character, has ever issued from the American press. C.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY

SEPTEMBER, 1843

Art. I.—*Aneurism of the Common Carotid Artery, being an Analysis of Seventeen Cases of this disease.* By Robert S. Wendel, M.D., of Murfreesboro, Tennessee.*

Aneurism, in whatever part of the body occurring, has always been considered an interesting disease to the surgeon, and a dangerous one to the patient. The opinions of the ancients relative to this disease were both vague and unsatisfac-

* We regret that our limits do not permit us to insert the whole of this excellent paper, embracing, as it does, the most elaborate account of the nature and treatment of aneurism of the primitive carotid artery with which we are acquainted. It occupies sixty-eight pages of manuscript, and forms the Inuagural Dissertation which Mr. Wendel submitted, last spring, to the President, Managers and Faculty of the Louisville Medical Institute, for the degree of Doctor of Medicine. The essay is illustrated by beautiful diagrams, and reflects much credit upon the author.—Eds.

tory, and to no artery is this remark more applicable than to the carotid. Ignorant of the anatomy and physiology of the brain, and of the arteries supplying it with blood, aneurisms of the carotid were permitted to take their own course, it being not even pretended to ligate that vessel for fear of injuring the functions of that important organ. "A case is given by John Bell, in which, so late as the year 1807 or 1808, a poor woman was suffered to perish by hemorrhage from the sac under the eyes of himself and colleagues, a whole college of surgeons, at that particular period, claiming to be surgeons to the Royal Infirmary of Edinburgh."†

That a ligature applied to this vessel will not injure the brain has long since been proved, and even both carotids have been tied in the human subject, with but a short period of time intervening, without any ill effects arising.

Cases are also recorded in which, on post-mortem examination, one or both carotids were totally obstructed, without any impairment of the intellect having been noticed during life.

The first instance in which the carotid was tied is mentioned in Benjamin Bell's Surgery. The operation was performed on account of a wound in extirpating a tumour. Mr. Abernethy is said to have tied it next, and after him, Mr. Fleming, a naval surgeon, in 1803; in both cases for wounds.

Sir Astley Cooper, however, was the first who tied this vessel for aneurism, but the case was unsuccessful. The ligation of the carotid may now be considered an every-day operation, being frequently performed for wounds, aneurisms, and as a preliminary measure in the extirpation of tumours about the face; though this latter has now partly fallen into disuse.

The carotid is not so often affected with aneurism as is generally supposed. Out of sixty-three cases of the disease reported by Mr. Hodgson, this artery was affected in only two instances, both occurring in males, while of the ascend-

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* Liston's Operative Surgery.

ing aorta, arteria innominata, and aortic arch, there were twenty-one cases, descending aorta eight, subclavian and axillary five, inguinal and popliteal fifteen. Of these sixty-three cases only seven occurred in females.

Out of one hundred and seventy-nine cases drawn up by Mons. Lisfranc, exclusive of those of the aorta, there were seventeen cases in which the carotid was affected.

Diagnosis.—Aneurisms of the carotid artery are liable to be confounded with other diseases. They may be mistaken for scrofulous enlargement of the lymphatic ganglions, encysted tumors, goitre and dilatation of the internal jugular vein.

The lymphatic ganglious, situated along the antero-lateral aspect of the neck, often become enlarged, and receiving the impulse of the carotid artery, may simulate aneurism of that vessel. The disease generally occurs in young subjects, and is attended by all the marks of a scrofulous diathesis, such as a fair skin, light hair and eyes, tumid lips and abdomen, and precocious intellect. The tumor is hard to the touch, inelastic, irregularly lobulated, and commonly longer in the vertical than in the horizontal direction.

It is easily influenced in its volume and consistence, by exposure to cold, and by the state of the constitution.

In the early stage of the disease, it is moveable and may be lifted away from the surrounding parts; by and by, however, it contracts adhesions, and becomes fixed in its situation. In many cases it is disposed to run into suppuration; the skin assumes a livid or purplish appearance, and the tumour at length yields at one or more points, discharging a thin yellowish matter intermixed with curdy flakes.

Hydrocele of the neck may also be mistaken for this disease. "The characters, however, by which the former may be distinguished from other affections, are, absence of pain, and tenderness on pressure, slight fluctuation, the slow progress of the tumour, years generally elapsing before it attains much development, and, above all, the history of the case. When the tumour projects outwardly over the carotid artery

it might be mistaken for aneurism, from which, however, it may, in general, be readily discriminated, by the elevation of the entire swelling from the impulse of the blood, and by the want of that alternate expansion, and retrocession, which are present in genuine aneurism."*

Aneurism of the carotid artery cannot always be easily distinguished from bronchocele or goitre. In the latter disease the tumour is comparatively insensible, devoid of pulsation, irregular in its consistence, being soft at some points, and hard at others, and more or less moveable. During deglutition, it accompanies the motions of the trachea and larynx. It is more common in the female than in the male, and is almost always very tardy in its growth, years elapsing before it attains much volume. Aneurism, on the contrary, progresses comparatively rapidly, the swelling is of pretty uniform consistence, does not follow the movements of the wind-pipe, imparts a distinct pulsation to the finger, and may be emptied of its contents by pressure along the course of the vessel, in which it is situated. When the tumour is large, the beating is generally distinguishable at the distance of a few feet from the patient, and if the ear be applied to the surface of the aneurism, the blood is heard to rush into it with a peculiar whizzing noise. In most instances of aneurism, also, the vessel is deeper seated than goitre, and the pulsation is so strong as scarcely to be mistaken.

When goitre, however, is extensive, and the pulsations of the carotid are freely communicated to it, the diagnosis will be difficult, if not impossible. A case of this kind, in which some of the most able practitioners of Philadelphia were deceived, is related by the late Dr. Griffiths in the ninth volume of the Eclectic Repository. The tumour was situated directly over the course of the carotid, and was pronounced by Dr. Chapman, Dr. Morgan, and the late Dr. Dorsey, to be of an aneurismal nature. The patient at length died, and upon dissection, Dr. Parrish ascertained that the vessel in

* Gross' Liston.

question was perfectly sound, and that the tumour was composed entirely of the thyroid gland. The neck was very short, the pulsation of the artery was imparted to the swelling, there was even a strong resemblance to the aneurismal thrill, and the morbid growth adhered so firmly to the surrounding parts that it could not be drawn away from them.

Another case, quite as remarkable, occurred some years ago in Paris. A creole negro had a tumour in the neck, which was submitted to the inspection of nearly all the distinguished surgeons of that metropolis, who pronounced the disease an aneurism of the carotid artery. The patient afterwards died of some other malady, when it was ascertained by Boyer that no such affection had existed, but simply an extensive enlargement of the lymphatic ganglions of the neck.

Aneurism of the carotid artery may also be mistaken for dilatation of the internal jugular vein. The latter, however, is a very rare affection, and the tumour is generally situated very low in the cervical region, appearing just above the sternum. It is also softer and more compressible than a true aneurismal swelling; the pulsation is more feeble and tremulous, the dilatation disappears when pressure is applied to the upper part of the vessel, and the turgescence is more diffused in its diameter, reaching sometime as high nearly as the angle of the jaw.

Aneurisms of the arch of the aorta are also liable to be confounded with this disease. "Aneurisms of long standing, which no longer throb, and the integuments over which are changed in color and likely to burst, may easily be mistaken for chronic abscesses, as the neck is frequently the seat of such diseases."*

Whenever any doubt exists as to the true nature of a tumour it may at once be dispelled by the introduction of a cataract needle or a delicate trocar.

Spontaneous cure.—Aneurisms of the carotid artery, like

* Cooper's Surgical Dictionary.

the same disease in other parts of the body occasionally undergoes a spontaneous cure. This, however, is of rare occurrence. The manner in which a spontaneous cure may take place is thus described by Mr. Wardrop.

1st. By the aneurismal sac being so strengthened and filled with coagulable lymph, that no fluid blood can pass into it, and of course all danger of rupture is prevented, whilst at the same time the original canal of the vessel remains pervious and carries on the circulation.

2d. By not only the sac being filled with coagulable lymph, but by the arterial canal being also obliterated.

3d. By the tumour acquiring such a size and position, that by pressing on the trunk of the artery, above or below, the sides of the aneurism are thus brought into contact and adhere.

4th. A spontaneous cure of aneurism has also been known to take place where the whole circumference of the vessel has been dilated, the sac being filled up with coagulum, but leaving a canal in the midst of the tumour through which the blood continued to pass.

5th. By a process of suppuration taking place in the sac after both it and the artery, both above and below the tumour, have been filled with coagulum. In such a case the integuments ulcerate, and a great quantity of the coagulum is discharged through the opening, which must be removed by the process of absorption.

The common tendency, however, of the disease is to a fatal termination, and the patient should therefore be placed under treatment, as soon as the nature of the lesion is ascertained.

The Hunterian operation was performed in nine cases. Of these, four occurred in females, and but three, or just one-third, terminated fatally. Of the latter, one died on the twenty-first day from inflammation of the sac, which extended to the base of the brain; one on the sixty-seventh from inflammation and repeated hemorrhages; and in one, that of Mr. Cline, no dissection is given.

In six of the cases, the disease occurred on the right side, in one on the left, in one on both sides (though the artery of but one side was tied) and in one, the situation is not given.

The occupation of the patients is given in only five of the cases; of these, two were laborers, one a porter, one a sportsman, and one a prostitute.

The cause of the disease is stated in but four. In two, it was brought on by a fall from a horse; in one, it was noticed soon after the man carried a heavy load on his back, and in one it was produced by a wound.

The duration of the disease, prior to the ligation of the artery, is noticed in all of the cases, except three. In one, it had existed six months, in one three months and a half, in one eleven months, in one eleven days, in one three months, in one three years.

The volume of the tumour, in four, was *very large*, in one five inches in length, by four in depth, in one of the size of a large walnut, in one the size of a walnut, in one of an egg, and in one as large as a goose egg.

The length of time required in performing the operation is not stated in a single instance.

In three of the cases two ligatures were used, and in one of these, the artery was divided between them, as recommended by Mr. Abernethy. In this case there was a difference of forty-eight hours in the separation of the ligatures, the upper coming away on the fifteenth day of the operation, the lower on the seventeenth.

In the remaining two cases both ligatures came away on the same day; that of Mr. Cooper on the twelfth; and that of Dr. Sykes on the tenth day.

In the six cases in which only one ligature was used, it came away on the thirty-ninth day, in one on the eleventh, in one on the twenty-first, and in two the day is not mentioned.

The operation of Brasdor, of applying the ligature to the distal side of the tumour, was performed in six of the cases.

Of these, five were females, and three, or just one-half, terminated fatally.

In case number two, the patient died three months after the operation, of hypertrophy of the heart, and it is likely this was the real cause of her death; at any rate it was a very unfavorable case for an operation of any kind.

The patient mentioned in case four died two months after the operation from repeated hemorrhages, and in case five ulceration of the wound with hemorrhage destroyed the patient eleven days after the operation.

In four of these cases the right carotid was affected; the left in the remaining two.

The occupation of the patients is not given in a single case.

The cause of the disease is mentioned in but three instances. In one, the patient referred it to palpitation of the heart from domestic affliction; in another the patient supposed it to be owing to the night air; and in a third it was referred to severe squeezing. Prior to the deligation of the artery, the disease had existed in these patients from eleven days to three years.

In case one, it was perceived eleven days previous to the operation; in one six months, in one seventeen months, in one several months, in one one month, and in one three years.

The volume of the tumour is noticed in all the cases but one. In three it was very large, in one two inches in diameter by two in breadth, and in one the size of a pullet's egg.

Summary.—The foregoing seventeen cases are all I am able to find in the medical and surgical works which I have examined, and these are by no means few in number. Aneurism of the carotid is generally believed to occur oftener in males than females, agreeing in this respect with that of the different arteries, but in the cases which I have reported, it appears that females were affected in ten instances, while it occurred in only seven males.

The ages of the patients were as follows. In three it occurred between ten and twenty, in two between twenty and thirty, in two between thirty and forty, in three between forty and fifty, in two between fifty and sixty, in two between sixty and seventy, in one between seventy and eighty.

The artery of the left side was affected in five of the cases, the right in ten, in one it occurred on both sides (though the artery of but one side was tied), and in one it is not mentioned.

The occupation of the patients is mentioned in five of the cases only. Of these, there were two laborers, one a porter, one a huntsman, and one a prostitute.

The cause of the disease is stated in only eight instances. In these, it occurred, in two, from wounds, in two it was caused by a fall from a horse, in one from exposure to night air, in one from domestic affliction; it was referred to severe squeezing in one, and in one it was caused by straining the neck.

The existence of the disease, prior to the treatment, is stated in all the cases, except four; varying from eleven days to three years. It was as follows: in two it had existed eleven days, in two one month, in one several months, in one three and a half months, in two six months, in one nine months, in one eleven months, in one seventeen months, and in two three years.

Of the fourteen cases in which the volume of the aneurismal tumour is mentioned it was as follows:

In one it was the size of a hen's egg, in one of a woman's two fists, in one of the volume of an egg, in one of the size of a goose egg, in one of a pullets egg, in one of a walnut, in one of a large walnut, in five very large, in one two and a half inches in breadth, in one five inches in length by four in depth.

The length of time required in performing the operation is noticed only in one case, that of Mr. Montgomery, in which it occupied twenty-five minutes.

In one of the cases cured by Valsalva's method, the patient

was under treatment about eighteen months, while the other was considered as cured in seven months.

In the cases in which one ligature was used, it was cast off, in one, on the eleventh day, in one on the seventeenth, in one on the ninetenth, in one on the twenty-eighth, in one on the thirty-ninth, and in one on the twenty-first. In those in which two ligatures were employed, they separated, in one, on the twelfth day, in one on the tenth, in one the upper came away on the fifteenth, and the lower on the seventeenth, and in six the day is not noticed.

Six, or rather more than one-third, terminated fatally; of these death occurred, in one, on the third day after the operation, in one on the twenty-first, in one on the sixty-seventh, in one in two months, in one in three, and in one in four months.

The cause of death, in two, was inflammation of the sac, hypertrophy of the heart in one, repeated hemorrhage in one, in another death occurred from ulceration and hemorrhage, and in one no dissection is given.

ART. II.—*A description of the Summer and Autumnal Diseases as they occur in the Wabash Valley, and particularly in Posey County, Indiana, and in White County, Illinois.* By ROBERT ROBSON, M.D., of New Harmony, Indiana.

The valley of the Wabash furnishes the most extensive field for observation on all the grades of our summer and autumnal diseases, with which I am acquainted, and it may not be altogether uninteresting to the profession for me to state what my experience has taught me on that subject, during a residence of eighteen years in New Harmony, Posey county, Indiana.

Topography.—The Wabash is a beautiful river, running generally south. Its banks are low and extend back in a rich,

level plain from three to five miles. Harmony is situated back from the river about a quarter or half a mile, on a second bank, and about six or eight feet above high water mark. On the opposite side the ground for many miles above and below this point is four or five miles wide. The lands adjacent to the river are higher than those in the rear. Numerous small bayous lead back and fill up the ponds and cover the low grounds. The face of the country for many miles above and below, in the neighborhood of the river, is generally level. The soil is alluvial and very rich, consisting of sand and black loam. The bottoms are covered with a heavy growth of timber, such as is peculiar to a rich soil, and the great mass of the lands lying opposite the village remains very generally in the natural state. Such of the above lands as are not in cultivation, are, after the month of May, covered with a very rank growth of vegetation of every kind. There are generally high waters at some period during the spring months, or between the first of March and the month of June; this has never failed since my residence here. Some years there are two freshets. In 1834 and 1836 the second came in the last of May or first of June.

When I commenced practice here in 1830 or 1831, I found the country, with the exception of the town of *New Harmony, which has been for many years remarkable for the health of its citizens*, infested with fevers almost of every grade from the most simple intermittent to the most fatal remittent. The spring opened with intermittents of a mild form accompanied occasionally with remittents. As the season advanced and the weather became warm, the severity and obstinacy of the intermittents became proportionably increased, and remittents became more severe and numerous. Towards autumn and during the fall, bilious remittents were very prevalent and often attended with symptoms of very great severity, developing in their course all the characteristics of western bilious fever. During its progress, if the patient had been neglected, or the treatment not well directed,

the tongue became covered with a dry brown or black scurf, the skin dry and husky, with much disturbance of the sensorium sometimes, though not frequently. Some cases were of a lingering character, continuing for ten or twelve days, and then terminating favorably. The general character of the diseases, when suitable attention was paid, was to intermit from the fifth to the ninth day, and form a salutary crisis.

The constitutional type was the same during the three succeeding years, though there was less sickness in the last then in the two preceding, and that which occurred was of a much milder type. During the summer and autumn of 1834 very few families in this district of country escaped the visitation of fever, which generally assumed the most serious character, carrying off many of the most respected citizens. The weather of this year differed much from the preceding with respect to rain, dryness, heat, wind, &c., &c. The early part of spring was remarkably cool and pleasant, there were frequent rains of short continuance, and the country was more healthy than usual.

May—Very warm and dry—several cases of mild intermittent fever.

June—Ushered in with very warm and dry weather, vegetation abundant, the Wabash high, and in low places overflowing the banks, and inundating the low lands—after the 17th we had frequent and heavy rains—a few cases of cholera morbus occurred.

July—The sickly season, as it is familiarly called here, begins about this time and continues until the frosts in the fall. In this month there were very warm winds, generally from the south-west. Remote from the Wabash, on the adjacent high grounds, dysenteries and cholera morbus prevailed, but towards the latter part of July subsided; whilst in August intermittent and remittent fevers became general, and of a more severe grade.

September—The east-winds generally prevailed, with the usual temperature of August, until the latter part of the month, when it became much cooler, and the winds more

north—a high grade of inflammatory fever prevailed. The congestive form became more general as the weather grew colder.

October—Winds generally west; heat of the sun oppressive during the middle of the day, with cool nights, until after the middle of the month, when the temperature seldom exceeded 50° Fah. After this time fevers rapidly subsided and were superceeded, in my practice, by a disease commonly denominated milk-sickness or trembles, which was at that time generally confined to neighborhoods bordering on the river.

In the above very brief, but I believe generally correct statement of the weather of the summer and fall of 1834, it will be observed why diseases are more violent in some seasons, and in some situations than in others—that the winds were mostly from a southern direction, while the low-lands were overflowed in the month of June when vegetation had much advanced, and in July were left with a large amount of putrefactive matter on the surface, to be acted upon by the heat of the sun, and consequently propagating miasmata and disease. In such seasons, we not only invariably have more sickness, but there is an increased malignancy in the character of the diseases.

The fevers of our summer and autumnal months are those generally denominated simple, inflammatory and congestive. The simple form of fever comes on with listlessness and languor, which sometimes continued two or three days, when the patient was taken with a chill, or a sense of coldness over the body particularly down the back, which lasted one or two hours and was followed by a preternatural heat over the whole body; the face flushed, and the eyes suffused—the pulse at the same time hurried and quick—prostration of strength—pain in the head and back, with sometimes soreness in the muscles of the legs and arms. The stomach toward the latter part of the season was irritable, rejecting in many instances every thing that was swallowed—the bowels costive, and the tongue, after the exacerbation had continued a few hours,

put on a whitish or brown coat—the appetite for cold drinks came on sometimes with the chill, but more frequently after the reaction—the exacerbations continued from ten to twelve hours, when a gentle diaphoresis might be observed on the surface. If proper medical aid was interposed early, this form of the disease yielded kindly, but if neglected a few days, it would assume the characteristic symptoms of the inflammatory form. All the preceding symptoms, in an aggravated degree, were attendant on the inflammatory bilious fever. The tongue covered with a dark or brown colored coat, the eyes suffused and of a yellow cast, languid and dull; laborious respiration; delirium; corded quick pulse and sometimes very irregular; loss of appetite, nausea and vomiting; the stomach frequently throwing up a thick ropy fluid of a yellow or green color; the skin exceedingly hot and dry, and often of a yellow tinge; bowels costive and when evacuations were procured, large quantities of dark, offensive matter would come away; urine scanty and very high colored, resembling the ley of wood ashes. To the high excitement of this fever, local affections were frequently added. The brain, lungs, liver, spleen or bowels, was generally the seat of inflammation, attended with acute pains, and other well marked symptoms of inflammation in those parts. The brain was the part most frequently implicated, and from its relations and functions the most important. In addition to the symptoms just enumerated, we may add (in cases where the head was conspicuously affected) a deep and severe pulsating pain in the head, throbbing of the carotid and temporal arteries, an injected conjunctiva and pain in the bottom of the orbits, with great sensibility and intolerance of light. Obstinate watchfulness, intellectual confusion, delirium and coma now ensued, and as the disease advanced in an unobstructed course, the brain became oppressed and the exercise of all the functions suspended; the tongue became dry and black; a striking hebetude is discovered in all the senses; the eyes are now insensible or nearly so, with dilated pupils; the voice falters, the hands tremble; the patient moans; involuntary dis-

charges of dark fœtid matter occur from the bowels; stertoreous breathing and convulsions close the scene.

Very few cases of this form of bilious fever proved fatal, when medical aid was resorted to in time. On the success of remediate agents, the stomach would become settled and composed, the remissions of longer continuance, the pulse soft and less frequent, the skin soft and moist; the tongue moist and clean around the edges, the inflammatory pains and sensorial disturbance would disappear, and the countenance comparatively a smile of composure, would presage a speedy convalescence. The liver was the next organ most generally implicated, and in all cases connected with yellowness of the eyes and skin, inflammation of that organ evidently predominated; the patient was distressed with a fullness and pain in the right hypochondriac region and under the shoulder blade in the course of the phrenic nerve, with clay or light colored stools. The other abdominal viscera before mentioned, were all (among the multiplicity of the afflicted) more or less seriously inflamed. This was indicated by pains in the regions which the respective organs occupy. In the two forms of bilious fever which I have endeavored to describe, as they appeared in the Wabash valley in the sickly year of 1834, it will be remembered that there was a high grade of action, or in other words, they were invariably attended with increased action of the heart and arteries, while the congestive form, which prevailed after the cool mornings and evenings of September, presented a striking difference in degree of arterial action. It was ushered in, as the other forms, with a cold fit of longer continuence; a partial reaction would succeed after a time, indicated by an increased temperature of the head and trunk, whilst the extremities remained cold: skin soft and clammy; pulse low, small and very compressible—during the exacerbation it would be full and soft; the temperature considerably below the natural standard over the whole system, or otherwise the heat was partial and confined to the head and trunk; the tongue after a few days put on a dark thick coat, especially in those cases where there was some increase

of vascular action in the early stage; articulation indistinct and the countenance haggard; the stomach was sometimes irritable, the epigastric region sore, and extremely tender on pressure and inflated—bowels torpid and discharging dark and offensive matter, and in some instances involuntary discharges with delirium and stupor took place soon after the appearance of an attack. There was anxious respiration and low moaning, and the patient, when accosted, would complain of general soreness of the whole body, great prostration of strength; the eyes were dull and sunken and often glassy; and in all such cases as terminated unfavorably, involuntary stools with slight hemorrhages from the nostrils, fauces, gums, or bowels, announced the approach of death. I would here observe that the foregoing symptoms are those of the fevers which occurred in 1834, and are intended to apply to the well defined cases of the different forms here laid down, which are descriptive of our fevers in general up to the present period, with some modification in degree of violence, corresponding to the season.

Treatment.—As the treatment of the simple form so nearly resembles that of the inflammatory, I shall speak of them both under one head; and in the order in which they seem to be required, as nearly as the circumstances of the disease will permit, for indeed the remedies of the aggravated cases of the one and the slighter cases of the other, were the same, modified according to circumstances.

In a large majority of cases the lancet was strongly indicated and freely used early in the disease; blood was taken without regard to quantity and from a large orifice, until the pulse was reduced in force and frequency, and the pain in the head and difficult respiration relieved. Employed in this manner, the lancet will in many cases effect a speedy resolution of the paroxysm, and if it does not entirely prevent its recurance, it will certainly lesson its violence, reduce the temperature, alleviate the pain, and produce an increased susceptibility to the impressions of medicine. It should be repeated as often, and to as great an extent as the symptoms

may require; those who were bled in the beginning of the fever, bore a repetition of the operation, at an advanced period, much better than when the previous evacuations had been omitted.

Emetics were next premised, and twenty grains of ipecacuanha with one or two of tartrate of antimony was generally prefered, and given so as to produce full vomiting, assisted in its operation by copious draughts of warm water. It is of much importance in the administration of this remedy, that it be given early in the commencement of the chill, when the case will admit of it, or immediately after the bleeding, while the system feels the impression occasioned by the loss of blood, before the disease has had time to reorganise its broken forces. By these means the diseased action was very often broken up, and convalescence speedily established. But it more frequently happened, that the disease pursued its course, and the next or succeeding paroxysm, was attended with extreme nausea and vomiting, when much relief was obtained from the effervescing mixture, mint tea, &c., with mustard sinapisms to the epigastric region and extremities.

As soon as the stomach would permit it, a cathartic of calomel and rhubarb, or calomel rhubarb and aloes, was given in a full dose, and repeated in such manner as to keep up continued evacuations of highly offensive and irritating matter from the bowels. I found the above combination to unload the bowels efficiently and promptly, producing in due course bilious evacuations which was beneficial in relieving the fever, pain, oppression, thirst and restlessness, when the general secretions succeeded that of the liver, and the disease soon yielded. In the advanced stage I found small doses of calomel, given at intervals of four or five hours, and determined to the bowels by infusion of senna and salts or Seidlitz powders, useful, supporting the biliary secretion and preserving the bowels in a soluble condition. Cathartics had a powerful effect in removing the congestive and inflammatory states of the viscera, as well as in subduing fever generally.

On the first exacerbation of fever, antimonials, or calomel

in combination with ipecacuanha, was given every two, three, or four hours, according to circumstances, during the stage of excitement; constant nausea was maintained, until the violent symptoms moderated, when the medicines just mentioned were administered more sparingly. This course was pursued after the offensive contents of the bowls had been thoroughly discharged; it seldom failed to relieve the patient, and produce a general relaxation of the surface, with a soft moist skin. Blisters to the extremities, when much heat and dryness prevailed, proved very beneficial.

Diuretics were found of great importance in arresting the progress of disease. A close observer will invariably find that, soon after the urinary secretion is established, the liver and skin will both generally begin to yield their respective secretions, and that the disease will generally be unable to resist the efforts of these organs. To fill this indication nitrate of potass, spirits of nitre and digitalis were all occasionally used with good effect.

Epispastics were used for the double purpose of moderating febrile action, and to relieve local affections. In the one case they were applied to the wrists and ankles and down the spine, and in the other over the seat of pain.

Tonics.—As soon as the inflammatory stage had subsided, and a decided remission occurred, sulphate of quinine and other tonics were prescribed, with the happiest effect, until the restoration of health.

In the treatment of the congestive form of bilious fever, that prevailed in 1834, I was governed by two leading indications: 1st, the removal of the bilious symptoms present, with a view of relieving the congestion: 2d, the production of a reaction in the system, with the view of relieveing the congestion. To accomplish the first indication or to relieve the urgent bilious symptoms, active mercurial purgatives were prescribed, followed by castor oil, and enemata, which effectually evacuated the vitiated contents of the bowels; when the pulse, though weak at first, became stronger, and the prostrated energies of the system were thereby improved.

It was then necessary to continue the mercurials until the evacuations assumed a more natural appearance, and the urgent symptoms disappeared. For this purpose calomel was given in small doses; and where the patient was much prostrated, the addition of camphor was thought necessary. This combination was given every three or four hours, followed occasionally by mild purgatives, until the cure was effected. The small doses of calomel were prefered, in order to have the remedy act more immediately on the hepatic system, and correct more efficiently the borbid secretion of bile. To answer the second indication or to bring about reaction of the system, and relieve the congestion, in addition to the above course, an attempt was made to induce as much as possible an inflammatory disposition in the system. The warm bath assisted by powerful rubefacients such as tincture of capsicum sinapisms to the trunk and extremities, and where local congestion of any of the viscera existed along with the general disease, stimulating embrocations with friction were freely used, and lastly a sinapism applied over the part. This course seemed to obviate the necessity for internal stimulents, employed by some practitioners in congestive states of the system. They excited a warmth over the whole surface; the pulse became fuller, and more regular in its beats; and, aided by the repeated operation of purgatives, the delirium was removed, and the strength gradually regained. With regard to venesection, I would observe that I generally saw this form of fever in my country practice in the advanced stage, and so prostrated were the energies of the system, that it was entirely inadmissible. The remedy in particular oppressed states of the system may answer, when used with caution and discrimination; yet in the practice of 1834, I well recollect that the number of deaths was so large in proportion to the number bled, that it became proverbial among the people, that bleeding was death.

About the season of the year when congestive fever prevails, we have here a disease, itself congestive, commonly denominated *milk-sickness* or *trembles*, which in the fall of 1834

was, in this section, more extensive in its range, and more violent in its character. Whatever may be the cause of this distressing disease, I have been forcibly struck with its resemblance to many of our common autumnal diseases; and the more I see of it, the more firmly I incline to the opinion that it has, with them, a common cause, or is of miasmatic or atmospheric origin. The identity of this disease with the disorder in cattle called trembles I think probable, having witnessed horses, cattle, and dogs die with it, while attending on their owners with milk-sickness (as it is termed), though this does not prove, as is generally asserted, that it is produced by eating the milk, butter, or meat of cattle, apparently healthy, and which run at large in the woods. Are not animals subiect to many of the maladies incident to the human family? Individuals have been afflicted with it, that are known not to have used either butter, milk, or beef. A highly respectable Medical friend of mine, who has had much experience with this disease, was some time since attending upon a family with milk-sickness, who had no cattle, and had not made use of any of the above articles, while a family living near, whose cattle had this disease, and who had been using both milk and butter freely, not being aware for some time of the presence of disease among their stock, remained in perfect health. It is said that cattle kept in cultivated pastures escape the disease; this I believe to be generally true, so far as the subject has come under my observation in Indiana. Those farmers who have good cultivated pastures, are in general able to take good care of their stock, and feed well; and such cattle, with few if any exceptions, will escape it running in the woods; while on the contrary, I believe it will be found that poor, half-starved cattle will take it whether in pasture or out of it, if exposed to the exciting cause. I know a few families who have been living for many years in the very centre of the infested district, who are particularly careful of themselves and attentive to their cattle, and who have never suffered in a single instance, either in their families or in their stock, though the latter have run at large

the whole time. That cattle in good condition are occasionally afflicted with this disease, is true; so are individuals in very comfortable circumstances occasionally afflicted with our fall fevers, but this does not prove that they are so liable as the poorer inhabitants of cold and uncomfortable dwellings. Thus, as I believe, it is not the confinement of the animal in good pasture or from the woods, that preserves its health, but the condition or nervous energy of the animal that resists the predominating cause.

This disease is ushered in by general prostration, particular after exercise, and a sensation of burning about the pyloric orifice of the stomach. After the lapse of two or three days, the debility and prostration increase, the burning sensation extends up the course of the esophagus, with nausea and incessant vomiting—there is obstinate constipation—the tongue is slightly coated but more generally preternaturally red; thirst intense, constantly craving cold water; pulse small and quick and sometimes hard and corded; with icy coldness of the extremities, and a countenance indicative of extreme suffering. The debility and prostration gradually increase to an alarming extent, most of the internal organs become involved, the secretions in general and particularly that of the liver are locked up, and all the morbid phenomena of the system are in full exercise. Towards the close of the disease, the pulse, that has been all along sinking, is now imperceptible, and there is hiccough, fainting, extreme coldness of the extremities, with delirium, coma, cold clammy sweats, frequent and involuntary discharges of black offensive stools, precisely similar to those evacuated in the last stage of typhoid fevers.

Prognosis.—A gradual cessation of the pain and burning sensation at the stomach, and of vomiting, with copious alvine discharges, a moist skin, with a return of the natural expression of the countenance, indicate a favorable termination of the disease. But, on the contrary, when the pain and burning of the stomach increase, when the vomiting continues almost incessantly, the bowels remaining confined, the pulse

becoming nearly imperceptible, and the countenance cadaverous, the worst consequences are to be apprehended.

Treatment.—About three months since, I was called to a Mr. H., who was laboring under the disease for the ninth time in the last twelve years; he had had the disease for three or four days, and was in the second stage. When roused up, he would answer to any question promptly, but would instantly relapse into a kind of lethargy. He had all the usual symptoms before described. By means of two or three doses of calomel, rhubarb and aloes, with purgative enemata, and blisters to the epigastric region and extremities, he gradually recovered. After the lapse of a few weeks, he went to work and induced fatigue, when all the symptoms in full force again appeared. I used calomel in combination with extract of butternut, ol. ricini and turpentine, soda powders and purgative enemata, when he again recovered.

About the same time, I saw two young women who had had the disease every year for several years in succession, with symptoms as above. I used calomel and extract of butternut, purgative enemata, blisters to the epigastric region, and extremities, &c., under which treatment they both recovered. One of them went to work, and thereby induced fatigue, returned home in the evening, complained very little, threw herself on the bed, and died, before her relatives were aware of her danger. From the above, it will be evident that the first stage of the disease requires very little treatment. The only thing necessary is to enjoin perfect rest, and administer some of the milder laxatives, such as super tartrate potass and jalap, ol. ricini or sulph. magnesia, so as to keep up a loose state of the bowels.

The second stage requires a much more energetic practice, and from the character of the symptoms we would be led at once to the use of depletory remedies. Venesection in the commencement of this stage, is naturally suggested, and I have employed it, in very many cases with the happiest effect, though the all important remedy in the treatment of this dis-

ease, evidently consists, as much experience has taught me, in purging in such manner as to bring away copious evacuations, which generally allays the gastric irritability, and restores the lost balance of the circulation. The greatest difficulty in obtaining this object, is occasioned by the constant vomiting which is generally relieved after the action of a blister applied over the region of the stomach.

New Harmony, 1843.

Selections from American and Foreign Journals.

Clinical and Pathological Report on the Pneumonia of Children as it prevails among the Poor in London. By Charles West, M.D., Physician to the Royal Infirmary for Children, and to the Finsbury Dispensary.*

PART FIRST.

If any person were to estimate the importance of pneumonia in early life from the space allotted to it in English works on the diseases of children, he would doubtles conclude that a malady concerning which the most experienced thought it necessary to say so little can neither be grave in its character nor frequent in its occurrence. Our tables of mortality, however, show that pneumonia is the cause of a larger number of deaths in childhood than any other diseases, with the exception of the exanthemata. It appears from the Appendix to the Third Report of the Registrar-General, that during the year ending May 22, 1841, 22,429 persons died within the Metropolitan districts under the age of fifteen. Of these 3058, or 13.6 per cent. died of pneumonia; 2963, or 13.0 per cent. of convulsions; and 1215 or 5.4 per cent. of hydrocephalus. A very similar result is obtained by examining the returns from Manchester, Liverpool and Birmingham, which are contained in the same report. In the year 1839, 11,164 deaths took place in these three towns, of persons under the age of fifteen. Of these persons 1348 or 12 per cent. died of pneumonia, 1615 or 14.4 per cent. of convulsions, and 493 or 4.4 per cent. of hydrocephalus. The slight

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* We give insertion, in our present number, to a longer paper than has ever before found its way into this department of the Journal. We do so because that we look upon the production as one of great merit; and we feel assured that those of our readers who shall give it an attentive perusal, will not require of us any apology for republishing it at length.—Edts.

in this case of deaths from convulsions cannot be regarded as invalidating the statement made as to the extreme frequency of pneumonia; but depends doubtless on the difficulty of obtaining an accurate return of the causes of death in places where there is a large proportion of migratory population, such as the Irish in Liverpool. That this is the true explanation of the apparent excess of deaths from convulsions appears further on observing that in Birmingham, where no such disturbing cause exists, and where the registers may therefore be presumed to be kept with greater accuracy, the per centage of deaths under fifteen years of age from convulsions is only 7.0, and from hydrocephalus 4.0, but from pneumonia 16.0 per cent. Even though the above returns were not completely exact, they yet must be regarded as affording a close approximation to the truth, and as establishing the serious nature as well as the frequent occurrence of inflammation of the lungs in childhood. A very large number of cases of this disease came under my notice at the Finsbury Dispensary, in the years 1841 and 1842, and at the Children's Infirmary in 1839–42, and the results of what I believe that I then learned are embodied in the following observations. For the opportunity of investigating both this and many other diseases of infancy during many years previous to my appointment to the office of physician to the Children's Infirmary, I am indebted to the great kindness of my friend and predecessor Dr. Willis; and gladly acknowledge the extent of an obligation which I can never hope to repay.

It will probably occur to some on reading the following remarks, that a great discrepancy exists between many of the statements and opinions they contain, and those of French writers of deserved reputation. To account for this, however, it will not be necessary to impugn the accuracy of the observations of either party; since two causes may be assigned fully adequate for its explanation. These are the very tender age of many of the infants who came under the notice of our continental neighbours; and the extremely unfavorable hygienic conditions in which all children are placed, whether at the *Hospice des Enfans Trouvés*, or at the *Hôpital des Enfans Malades*. The investigations of Billard and Valleix were carried on at the Foundling Hospital, and consequently for the most part on children only a few days old; while no child labouring under pneumonia who came under my notice was less than a month old. It should too be borne in mind that the morbid condition of the lungs of new-born children, which depends on their imperfect expansion at birth,

(first described under the name of atelectasis pulmonum by Dr. E. Jörg,*) was unknown either to Billard or Valleix, and that even now the French are by no means familiar with it.† But the condition of those children who are admitted into Foundling Hospitals is precisely such as most frequently gives rise to this affection; and, as Hasse‡ has shown in his elaborate work on Morbid Anatomy, the symptoms noticed during life, and the appearances found after death in many of the cases described as pneumonia by French writers, are exactly such as characterize atelectasis pulmonum.

Ample evidence exists of the extremely unfavorable conditions under which children are placed in the Children's or Foundling Hospital at Paris. One result of this circumstance is shown in the endemic prevalence of diseases in those institutions such as do not exist elsewhere; another in the frequent complication of almost all diseases with other secondary affections. Of these secondary affections gastro-enteritis and pneumonia are the most frequent. So often indeed is a condition of the lungs resembling that produced by inflammation observed among the inmates of the Foundling Hospital, that some have asserted pneumonia to be an invariable complication of the diseases of new-born infants.§ The researches too of M. Becquerel,‖ which were carried on at the *Hôpital des Enfans Malades*, where none of the patients are under two years of age, discovered traces of inflammation of the lungs in the bodies of 49 out of 133 children who had died of various affections. From these facts and some others of a like nature, M. Becquerel concludes that pneumonia supervenes rarely in perfectly healthy children; that it occurs most frequently in those who are exhausted by previous disease, or placed in unfavorable hygienic conditions; and that it comes on in the course of acute diseases of specific adynamic character. To this opinion French writers almost universally subscribe, and some have even denied the existence of idiopathic pneumonia in children between two and five years of

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* In his Dissertatio de pulmonum vitio organico—Lips. 1832; and afterwards more fully in his work, Die Fötuslunge im gebornen Kinde.—Grimma, 1835.

† In proof of this, see a paper by M. A. Lhommeau, in Gaz. des Hôpitaux, Sept. 20, 1842, "Sur un état particulier du poumon chez un nouveau né," wherein he describes minutely a case evidently of Atelectasis; and notices its difference from pneumonic lung, but is quite at a loss as to its real nature.

‡ Specielle pathologische Anatomie. Band i.—Leipsig, 1841, s. 324–35.

§ See a paper by M. Savatier, in La Clinique for 1831, republished in Froriep's Notizen, Bd. xix No. xxi., also Valleix Clinique des Malad. des Enfans. Paris, 1838. Chap. ii.

‖ Archives Générales de Médecine, 1839, p. 437.

age.* MM. Rilliet and Barthez† likewise, though they do not agree to this proposition as absolutely true, yet admit that it is subject to but very few exceptions, since they met with only 3 instances out of 40 cases of pneumonia which occurred in children between two and five years of age, where the patients were previously in good health. Even between the ages of six and fifteen, idiopathic pneumonia according to their observations is rare, 6 only out of 20 children having been free from other disease at the time of its invasion.‡

It may suffice to have mentioned these facts without enlarging on the different features which disease must present among children who for the most part were not suffering from extreme poverty, and who were tended by their parents at their own homes, from those which it wears among the wretched inmates of the Foundling and Children's Hospital at Paris.

Morbid Anatomy. I will now proceed to detail the results of my own observations; prefacing them with a Tabular View of 37 *post-mortem* examinations of children who died of pneumonia. The appearances are arranged under the heads of Lobar, Lobular, or Vesicular Pneumonia, according as one or the other rorm of inflammation predominated.

[The tables here alluded to occupy nine pages, containing the details of the *post-mortem* examinations of the bodies of 37 children. From them we gather that 22 cases presented instances of *lobar* pneumonia; 9 males and 13 females. Two were of less than one year old; 9 between the ages of 1 and 2 years; 2 between 2 and 3; 3 between 3 and 4; 3 between 4 and 5; 1 between 5 and 6; 1 of 9; and one of 11. Thirteen of these cases (*lobar* pneumonia) were idopathic. The remaining 9 followed various diseases; one followed coryza in a phthisical child; one followed symptoms of gastro-enteritis; one supervened on phthisis; one supervened on measles complicated with diphtheritis; one complicated measles which

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* Gerhard, in American Journal of Medical Sciences, August and November, 1834; and Rufz, Journal des Connaissances Médico-chirurgicales, 1835, p. 101.

† Maladies des Enfans, Aff. de Poitrine.—Paris. 1838, p. 76.

‡ Since this was written, MM. Rilliet and Barthez have published their Traite Clinique et Pratique des Maladies des Enfans, and the statements contained in it show the frequency of idiopathic pneumonia to be greater than they had formerly supposed. "Of 245 children attacked with pneumonia, 58 were previously in good health, 24 of these 58 children were under five years old, 34 had exceeded that age."

supervened on hooping-cough; one supervened on acute hydrocephalus in a phthisical child; two accompanied dropsy after scarlatina; and one supervened in course of acute rheumatism.

Eleven out of the 37 presented instances of *lobular* pneumonia; 5 males, and 6 females. Out of these, 5 were idopathic; 5 followed hooping-cough; and 1 accompanied measles which followed croup.

Four out of the 37 presented instances of *vesicular* pneumonia; 2 males, and 2 females. Three of these were idiopathic, and the other followed hooping-cough.

As the remaining details of the tables occupy so much space, and as suitable inferences are drawn from them by our author, we have deemed it best to omit them.—Edts.]

No one can be more sensible than I am of the many deficiencies in the above tables, and I can only plead in extenuation that almost all the *post-mortem* examinations were made without assistance, in the houses of the poor, whose prejudices and suspicions often rendered it impossibible to devote to such investigations more than a small portion of that time which they require. The facts, however, though incomplete, may be relied on, since in no case are they stated from recollection, but always from notes taken on the spot.

The first conclusion which may fairly be deduced from these data is, that the lobar pneumonia attacks children much more frequently. in comparison with the other forms of the diseases, than has been imagined by French writers; and that differences of age do not occasion such a liability to one form of inflammation of the lungs, and such an immunity from the other form as would appear from their statements. Of twenty-two *post-mortem* examinations of cases of lobar pneumonia, nineteen are of children under five years of age, and ten of children under two; while two of the *post-mortem* examinations of cases of lobular pneumonia are of children between the ages of six and seven.

A more striking difference between the two classes of cases appears in the fact that five of the cases of lobular pneumonia supervened on hooping-cough, and that in another instance the disease complicated an attack of measles which succeeded to croup. In the remaining five cases indeed, it is said to have been idiopathic, but even here the bronchi were found

either greatly injected or containing a very abundant secretion in their cavities. These circumstances give considerable probability to the supposition of some Freneh writers, that lobular pneumonia occurs as the result of the extension of inflammation of the bronchi to the substance of the lung,—a theory which would explain many of the peculiarities that distinguish it from lobar pneumonia. Its greater prevalence during infancy and early childhood than subsequently, might perhaps be accounted for in accordance with this hypothesis by the extreme frequency of catarrh among young children, and by the fact that in the great majority of cases hooping-cough and measles occur before the commencement of the second dedtition.

The appearances produced by lobar pneumonia in the child do not require particular notice, since they differ in no important respect from those observed in the adult.

I once met with a condition of the lung. (which I believe to be very rare), closely resembling what some have described as chronic pneumonia. The subject of this observation had suffered from cough and difficult breathing for a month before she came under my care, and died ten days afterwards. On examining the body a small quantity of clear serum was found in the cavity of the left pleura, and a few easily broken adhesions existed between the left lung and the ribs. The right pleura contained from ℥ij. to ℥iij. of a turbid sero-purulent fluid, and the lung was invested with a thin layer of yellow lymph, by which it was in many parts connected with the ribs. The upper two thirds of the upper lobe of the left lung were slightly congested, the lower third was in a state of gray hepatization, with purulent depôts in many of the pulmonary vesicles, constituting the state described as vesicular pneumonia or vesicular bronchitis by different authors. The left lower lobe was in the first stage of pneumonia. The different lobes of the right lung were adherent to each other. The lower lobe was in the first, the middle in the third stage of pneumonia. The upper lobe was perfectly solid, of a light gray colour, resembling very much a piece of soap, smooth when cut, not soft, but easily broken. In its substance were patches of a red colour, like wine lees; soft and pultaceous to the touch, and breaking down into a kind of quagmire, in which no trace of pulmonary tissue was discernible. The lower edge of the lobe had generally this red appearance and pultaceous consistence, but little patches of it, some not bigger than a pea, were diffused through its substance in various

parts. Neither the lungs nor any other organ in the body showed any trace of tubercle.

The condition to which the appearances in this case bear the closest resemblance is not that gray form of chronic pneumonia described by Andral, in which the lung retains its granular structure; but a state which has been described by Hasse in his Morbid Anatomy. That writer says,* that sometimes he has found "in children who have had symptoms of inflammation of the lungs, a light gray, nearly white, or yellow, induration of a whole lobe or of several lobules, which seems to affect the upper lobes more frequently that the lower." The appearance is quite different from that sometimes met with in children when a whole lobe is converted by tubercular deposit into a solid, cheesy, substance; and I am the less disposed to consider the change as any variety of tubercular degeneration, owing to the absence of tubercle from all other parts of the body.

There is a condition of the lungs, described under the name of *carnification* by MM. Rillet and Berthez, and regarded by them as of frequent occurrence. I have also met with it, though neither so frequently, nor involving so large an extent of pulmonary tissue as in the cases described by those gentlemen. I have not, however, included it in the table of *Post-Mortem* Appearances, since some of the examinations there recorded, were made before I had met with their work, and consequently before my attention had been especially directed to it. They describe portions of lung which have undergone this change as being depressed below the level of the surrounding tissue, of a violet colour, presenting when cut a smooth, red surface, yielding a bloody serum when squeezed, in which no air bubbles are contained, and in short resembling a portion of muscle. The comparison they make of lung in this condition, with a portion of fœtal lung is very exact; its appearance indeed is precisely such as is observed in infants who have died from Atelectasis Pulmonum. The advanced age of many of the patients in whom it was noticed by MM. Rilliet and Barthez, as well as by myself, forbids us to attribute it to that cause. They suggest that it may be a form of chronic pneumonia, but this supposition can hardly be considered tenable, if we bear in mind that in many of the instances in which it was observed the inflammatory process ran its course with great rapidity.

* Op. cit. p. 292.

Neither does it seem attributable to the pressure of fluid effused into the pleura, since in one only of MM. Rilliet and Barthez's eleven cases in which the lung was carnified did there exist any effusion into the sac of the pleura;* a statement which my own experience fully confirms. This condition usually presented itself to me affecting a cluster of two or three lobules in the substance of a lung, or more frequently fringing the lower edge of a lobe; the lower edge of the upper er middle lobe being its seat more frequently than the lower edge of the lower lobe. I would not have alluded to a condition on the real nature of which I can throw so little light, but from the hope that the attention of others more favourably circumstanced for the pursuit of morbid anatomy may thereby be directed to the subject.

Closely allied to lobar pneumonia is that œdematous condition of the lung, not unfrequently met with in children dying with chest affections in the course of dropsy after scarlet fever. In most cases where this state is found after death, the dyspnœa has either come on, or, at least, has been aggravated very suddenly, being attended with great distress, and exceedingly tumultuous action of the heart, and proving very rapidly fatal. A considerable quantity of serous fluid is generally found in each pleura, both lungs are universally congested, and gorged with bloody, frothy fluid, which exudes abundantly on cutting into them. This is evidently not the result of mere position, since the upper are quite as much affected as the lower lobes. The congestion appears to exist in the same degree everywhere, and though the texture of the lung may be less firm than natural, yet I have never found any portion in a state of actual hepatization.

Lobular Pneumonia. It has not been attempted in the table of morbid appearances to make that distinction between cases of simple and of generalized Lobular Pneumonia which has been drawn by MM. Rilliet and Barthez. It will be seen by a reference to the table, that in almost every instance, even if the inflamed lobules in one lung were distinct, the pneumonia had become generalixed in the other. Perhaps, too, MM. Rilliet and Barthex would have found this to be the case more frequently, if the children who came under their notice had been placed in conditions more favorable to their bearing

*These gentlemen base their observations in their recent work on forty-two instances of carnification, and they expresely state that their remarks do not refer to that form of the lesion which is the mechanical result of effusion into the pleura. (Op. cit. t. i. p. 74.)

up under the disease, and if time had thus been given for the lobular pneumonia to become generalized.

First and second stages. A lung affected with Lobular Pneumonia presents a mottled appearance, portions of a deep red colour being interspersed in the midst of others having a natural aspect. This condition closely resembles that of a lung which is the subject of Atelectasis, but there is one point of difference by which the two states may very generally be distinguished from each other. In each, the dark portions of the lung are depressed beneath the general level; but in Atelectasis this depression is real and owing to the dark portions never having been expanded by the entrance of air; in Lobular Pneumonia it is apparent only, being produced by the emphysematous distention of the surrounding tissue. A section of the lung presents an appearance similar to that of its surface, and shows even more clearly that the red portions are inflamed lobules, and the pale lobules those which have not been the seat of inflammatory action. It happens indeed comparatively seldom, that single lobules are found affected, the inflamed patches usually comprising four or five, which together form a mass of the size of a nut or an almond. These portions of inflamed tissue give to the lung an unequally hard feel, such as is described, though apparently without its cause being understood, in Dr. Watt's valuable monograph.* It is there said in the account of the *post-mortem* appearances found in one case, that "The lungs felt knotty, and uncommonly firm in some places; but on cutting into them no tubercles, such as are met with in phthisis, could be detected." If the patient lives for some time, the intervening substance usually becomes affected and the lobular is thus converted into lobar pneumonia. This change does not appear to take place by the gradual extension of disease from each inflamed lobule as from so many distinct centres, in which case one would expect to see a gradual shading off of the inflammation from the dark, highly-inflamed centre, to the paler, less inflamed periphery; but sooner or later the whole intervening pulmonary substance seems at once to become the seat of inflammatory action which runs its course as in ordinary lobar pneumonia. It happens, indeed, sometimes in cases where an entire lobe is affected with lobar pneumonia in the first stage, that some dark-red and perfectly solid patches are found which might

* Treatise on Chincough. Glasgow, 1813, 8vo., p. 131.

seem to indicate that the disease began a lobular pneumonia. But even here, there is none of that gradual deepening in intensity of the inflammatory appearances as we approach each solid lobule which must needs exist if lobular pneumonia became general by involving the different lobules in succession. In a few cases in which pneumonia, originally lobular, was becoming general when death took place, I have found the pulmonary tissue intervening between the inflamed lobules "drier than usual, not at all engorged, as in Laennec's first stage, and of a bright-red colour from intense arterial injection;" in that condition in short, regarded by Dr. Stokes* as constituting really the first stage of pneumonia.

Third stage. In the greater number of cases of lobular pneumonia death occurs before the inflamed lobules have passed into the stage of gray hepatization, or the lobular pneumonia becomes general, and the third stage consequently presents no peculiarity. To this, however, there are occasional exceptions, the inflamed lobules either becoming infiltrated with pus, and then presenting on a small scale the same appearance as is seen on a large scale in ordinary gray hepatization; or each lobule becomes the seat of a small, distinct abscess; with numbers of which the lung seems riddled. These pulmonary abscesses were met with twice; both times in cases where pneumonia had supervened on hooping-cough. In one instance, they were found in both lungs and coexisted with extensive tubercular deposit in those organs. It might indeed be objected to this case, that the supposed vomicæ were in reality softened tubercles, though it is my belief that no such error was committed, and that none of the tubercles had passed the crude stage. Be that, however, as it may, no such objection exists in No. 8, in which the vomicæ existed only in the lower lobes of each lung, while no tubercle was found in any organ of the body. These collections of matter which vary in size from that of a millet-seed to that of a pea, are found in the centre of the lung as well as near its surface. They sometimes communicate distinctly with a bronchial tube, but at other times no such communication can be clearly traced. They are irregularly circular, not lined by any smooth membrane, nor surrounded by a barrier of indurated lung such as is often seen around small collections of softened tubercle. They may be further distinguished from tubercle by the circumstance that they usually occupy the lower lobes

* Diseases of the Chest. Dublin 1837, p. 311.

only, and that they are found in cases where all other organs are free from tubercle. It is decidedly a rare condition. MM. Rilliet and Barthez met with it only twice in forty-three *post-mortem* examinations;* and I but twice in thirty-seven.

Vesicular Pneumonia. That state of the lungs known by the name of Vesicular Pneumonia or Vesicular Bronchitis first excited general attention from a description of it contained in a dissertation by M. Lanoix. The appearance, however, is described by Dr. Watt† who had observed it and referred it to its true cause. A lung, or a portion of lung which is the seat of this affection, presents an uneven surface; the inequality being produced by the presence of a number of small, circular, yellowish prominences, which bear a considerable resemblance to crude tubercles. They may, however, readily be distinguished from tubercle, for not only do they almost always occupy the lower margins of the different lobes, but on puncturing any one of them with the point of a scalpel, a drop of pus will exude, showing them to be small collections of matter. The cavity in which these purulent collections exist appears to be that of the extreme pulmonary vesicles, a fact which may be ascertained by tracing a minute bronchus to its termination in one of these little sacs.

This condition is a very frequent complication both of lobar and lobular pneumonia, when it fringes the inflamed lobes, especially at their lower margins. Occasionally, too, it involves the whole of the middle lobe of the right lung, but it will be seen by a reference to the table that it seldom constitutes the chief lesion. In each of the four cases also in which vesicular pneumonia was the most prominent morbid appearance, the lungs presented signs of the other forms of pneumonia in a more or less advanced stage; the only exception to this rule being in No. 1, in which puriform secretion was contained in the pulmonary vesicles at the upper part of the upper lobe of the right lung uncombined in that situation with any of the other forms of pneumonia.

Complications. *Affections of the bronchi.* The state of the bronchi, and the nature of their contents were noted, though not with all the minuteness desirable in twenty-five cases. The following general results will be found, however, very nearly accurate. Some degree of increased redness of the air-tubes exists in most cases of pneumonia: in lobar

* In their recent work, they give the proportions as 26 in 314 *post-mortem* examinations of lobular pneumonia, p. 67.

† Op. cit. p. 139.

pneumonia, however, this redness is rarely intense, and is very often met with only in those situations where the substance of the lung itself is inflamed. In lobular pneumonia, intense congestion of the air-tubes is much more frequently observed, and is especially remarkable in the lobular pneumonia, which supervenes on pertussis. The bronchi are oftener empty in lobar than in lobular pneumonia, though in the former it is common to find puriform secretion in the bronchi near to any part which has passed into the third stage of pneumonia. Sometimes, too, abundant mucous fluid is found in the air-tubes while their lining membrane is quite pale; the accumulation of fluid in these instances being attributable to the inability of the patient to expectorate. In lobular pneumonia secretion of some kind or other is usually contained in the bronchi. It is oftener mucous than puriform, sometimes scanty, occasionally very abundant, and in this case it is not unfrequently very tenacious, and of a consistence approaching to that of false membrane. In these instances the secretion is usually more membraniform in the larger bronchi, more fluid in those of smaller caliber, which are sometimes rendered impervious to air by its quantity. I have found this secretion nearly approaching the membranous form only in two cases, in both of which it was associated with lobular pneumonia. Many points connected with this affection are undetermined; and some French writers* lean to the opinion of its being an essential disease, a true croup of the bronchi, and regard the pneumonia with which it is associated as a frequent but not necessary complication. I do not feel myself competent to offer an opinion on the subject, but will merely observe, that in neither of the two cases above alluded to were the symptoms observed during life different from those of ordinary pneumonia.

Dilatation of the bronchi was observed in eleven instances, but it was possibly overlooked in some cases where it did not exist in a very marked degree. This dilatation was never irregular, as it is occasionally in the adult, when it gives rise to an appearance which has been likened by Laennec to that of some marine fuci. It always presented the tubular form: was limited, when slight, to the smaller bronchi, but when considerable it likewise involved those of larger size. It

* See the cases and remarks of Jurine in Royer Collard's Rapport sur le Croup- 2ieme ed.—Paris, 1836, p. 34; and p. 222, No. viii. of the Appendix. Also M. Fauvel's Reecherches sur la Bronchite Capillaire, &c.—Paris, 1840, 4to.

will be seen by reference to the tables, that it was in cases where pneumonia had supervened on hooping-cough, that this dilatation existed in the most marked degree. The same tables also show that the measure of dilatation of the air-tubes bore no proportion to the amount of fluid they contained; a fact which may further prove that some theory other than that of their mechanical distention must be adopted in order to explain this occurrence. The change effected by the inflammatory process in the vital contracility of the tube is probably, as Dr. Stokes suggests, the chief cause of this condition, to which in cases of hooping-cough is superadded the influence of the violent inspirations which occur during the paroxysms of the cough.

Emphysema. The extreme frequency of emphysema as a complication of infantile pneumonia renders some notice of it necessary. It was found occupying the upper part of each lung, and frequently fringing the lower edge of each upper lobe. It was usually most considerable in cases where severe bronchial symptoms had existed, but was also very extensive in some cases which had never been marked by violent cough, but in which the inflammation involved a very considerable extent of lung, and ran a very rapid course. Interlobular emphysema was observed in four cases, sometimes simply dissecting the different lobules from each other, at other times giving rise to a number of vesicles containing air which covered the surface of the upper lobe of each lung.

Pleuritis. In 12 of the 37 cases no traces of inflammation of the pleuræ were found; in 5 there ixisted old adhesions more or less extensive, and in 20 there were the marks of recent inflammation. In 12 of the 20 cases both pleuræ were affected; in 6 adhesions existed only on the right, and in 2 only on the left side. One of the cases of double pleurisy might be characterized as slight; in 5 others the disease, though slight on one side, was extensive on the other, and in the remaining 6 extensive pleurisy existed on both sides. In 17 cases adhesions between the costal and pulmonary pleura and the presence of more or less lymph on the surface of the lung were the only signs of pleurisy; but in 8 cases there was also effusion of a notable quantity of fluid. In 3 instances this effusion was serous; in the remaining 5 it consisted of a turbid, sero-purulent or purulent fluid.

The above-mentioned results which agree very closely with those obtained by MM. Rilliet and Barthez show how little foundation exists for the statement which has been made, that

"there does not appear to be much tendency to pleuritis in the young subject."* This error has most likely arisen from Dr. Maunsell applying to children of all ages, that which is true only of those who are very young. It appears probable indeed, from the researches of M. Ch. Baron,† that the liability to pleurisy is much greater among children above 2 years of age, than among those who are younger; since "of 3392 autopsies of children from 1 to 2 years old, pleurisy was found only in 205, and in 79 the pleura was otherwise unhealthy from some non-inflammatory cause; or, in other words, inflammation of the pleura was found only in 6 per cent., while in 181 autopsies of children from 2 to 15 years old, the pleura of 158, or 87 per cent. presented signs of inflammation."

Pericarditis. Of the three instances in which pericarditis coexisted with pneumonia, one was a case of rheumatic pericarditis; in the other two the pericardium was probably affected by the extension of the inflammation to it from the pleura. M. Ch. Baron‡ mentions two instances in which he believes that this occurred, and two years ago a little girl was under my care in whom signs of pneumonia had existed for some days, and a pleural friction sound had been heard for a short time, but had again disappeared when a to-and-fro sound became distinctly audible, accompanying the heart's action, and continued to be heard until the patient died. Unfortunately a *post-mortem* examination could not be obtained.

Tubercle. Tubercles were found in 10 cases either in the lungs or the bronchial glands, or in both. In 5 they coexisted in the two situations, in 1 they were found only in the lungs; in 4 only in the bronchial glands, and in 1 of these 4 a single gland was affected, and that had undergone the cretaceous change. Comparatively rare, however, as it is to meet with tubercle in cases of acute inflammation of the lungs, there is a kind of bastard pneumonia which is by no means unusual in infants whose lungs have undergone very extensive tubercular degeneration, such as is seldom met with after the first two years of life. It comes on insidiously in infants at the breast, or in children in whom the process of dentition is not completed; its symptoms, consisting in some exacerbation of the previously existing fever and increase of the cough and dyspnœa, attract but little attention, and serious alarm is not

* Maunsell and Evanson on the Diseases of Children 2d edition, p. 309.
† De la Pleurésie dans l'Enfance. Paris, 1841, 4to, p. 52. Note 3.
‡ Ib. p. 49.

excited until it is seen how little they are amenable to any treatment. Its course is generally slow, occupying a fortnight or three weeks, but instances do occur in which the fatal termination takes place much more speedily. A lung which has been the subject of this morbid process presents a singular appearance; parts of it being of a solid texture, and yellowish white colour from tubercular deposits, interspersed with patches of a deep red hue, which are the lobules that were not involved in the tubercular degeneration, but which have become the seat of inflammation.

PART SECOND.

Causes of Pneumonia.—I have now noticed all the chief points in the morbid anatomy of pneumonia which my own observation could serve to elucidate, and pass next to the examination of those circumstances which favour the development of the disease.

Influence of season. The season of the year has always been regarded as exercising considerable influence on the development of pneumonia, which has been generally supposed to be most frequent in the later winter and early spring months. The proportion borne by cases of pneumonia to all the cases, 2450 in number, that came under my notice at the Infirmary for Children, in 1841 and 1842, toking the mean of the two years, is shown to have been, during each three months, as follows:

In 1st three months	5.1	per cent.
2d „	2.5	„
3d „	3.8	„
4th „	5.8	„

Although this table does not quite accord with the generally received opinion as to the season when pneumonia is most prevalent, yet it tallies exactly with the results presented in the Third Report of the Registrar-general. It appears from that document, that the greatest mortality from pneumonia among persons under the age of fifteen years, takes, place in the month of December; and on a comparison of the different quarters of the year, it will be seen that the deaths from pneumonia are to the deaths from all causes, of persons under fifteen, in the following proportions:

In 1st three months	15.3	per cent.
2d „	11.4	„
3d „	8.9	„
4th „	18.7	„

Age. The age of the subject appears to exercise a very considerable influence in predisposing to pneumonia. During the years 1841 and 1842, 118 cases of idiopathic pneumonia came under my notice. The following table represents the ages at which these cases occurred, and the proportion per cent. they bore to the total number of cases of all diseases at corresponding ages.

From this table it appears that during the first five years of life, the cases of pneumonia bore the proportion of 10.3 per cent. to the total cases, while during the succeeding five years they were in the proportion of only 1.3 per cent. of the total cases. It will further be remarked, that during the first two years of life the proportion is as high as 17.5 per cent., and that the period when pneumonia is most prevalent coincides exactly with that during which the process of dentition is going on most actively; namely, from the sixth to the eighteenth month.

Age.	Male.	Female.	Total.	Proportion to all Cases
Under one month	0	0	0	.0 per cent.
Between 1 and 2 months ...	1	0	1	2.7 ,,
2 3 ...	3	0	3	6.5 ,,
3 6 ...	3	1	4	3.1 ,,
6 12 ...	19	6	25	8.7 ,,
12 18 ...	9	17	26	8.6 ,,
18 2 yrs. ...	5	6	11	5.5 ,,
2 yrs. 3 ...	11	10	21	7.8 ,,
3 4 ...	5	7	12	4.7 ,,
4 5 ...	3	4	7	3.9 ,,
5 6 ...	3	1	4	2.5 ,,
6 7 ...	1	0	1	.8 ,,
7 8 ...	1	1	2	1.9 ,,
8 9 ...	0	0	0	.0 ,,
9 10 ...	0	1	1	1.6 ,,
	65	53	118	

A substantiation of the above statement is furnished by the Third Report of the Registrar-general. It appears from tables which that report contains, that of 1553 deaths from pneumonia which occurred in Liverpool, Birmingham, and Manchester, 1348, or 86.7 per cent. were of persons under fifteen. Of these 1348,—1093, or 81 per cent. were of children under the age of two; and 1231, or 91.3 per cent. of children under three years old.

The influence of age on the production of secondary pneumonia is a point on which I have not such facts as could be

represented in the numerical form, but my decided impression is, that it is nearly the same in secondary as in idiopathic pneumonia, and the observations of MM. Rilliet and Barthez are favourable to this opinion.

Sex. Of the 118 cases which form the subject of the foregoing table. 65 occurred among boys, 53 among girls; and the bills of mortality for Manchester, Liverpool, and Birmingham show a similar excess of males among the deaths from pneumonia under puberty. This excess is somewhat greater than the actual excess of male births suffices to explain, although, if we calculate 105 male to 100 female births, it must be confessed that the influence of sex is at any rate very small.

Previous health. French practitioners have insisted so strongly on the importance of previous health as predisposing to pneumonia, that the subject must not here be passed over without notice. In 33 cases the previous health of the patients was ascertained, and found in 25 instances to have been good, in 7 delicate, and only in 1 decidedly bad. The conclusion, therefore, that a previously indifferent state of health predisposes to pneumonia, cannot be adopted with reference to children attacked by the idiopathic form of the disease in this country.

Disease. I regret that I have not data sufficient to enable me to state with perfect accuracy the proportion of cases of different diseases in the course of which pneumonia supervenes as a secondary affection. It is my belief, however, that (not reckoning catarrh, the influence of which will be presently considered), the chief diseases in the course of which inflammation of the lungs occurs may be ranged in the following order: Measles, Hooping-cough, Diarrhœa, and Remittent Fever. I can confirm the statement which has been made by others, as to the rarity of pneumonia in the course of scarlet fever, though the disease is by no means unusual in the course of the subsequent dropsy. In the few instances of small-pox which have come under my care, I have, in common with others, found inflammation of the lungs to be a most frequent and most fatal complication.

Catarrh. The authors of the most popular English work on the Diseases of Children say, that they "doubt much if pneumonia ever occurs in young children as a primary idiopathic affection;"* and express their opinion that it always comes on as secondary affection in the course of bronchitis. This assertion, coming with the weight which it necessarily

* Maunsell and Evanson, op. cit., p. 308.

receives from the deserved reputation of its authors, must, if erroneous, lead the practitioner into serious mistakes. That it is erroneous, I feel fully persuaded. In 50 cases of idiopathic pneumonia I have carefully noted the mode of attack, and find that in only 15 was it preceded by catarrhal symptoms. This fact is shown in the following table, as also is the other fact that the frequency of catarrh, as a prelude to pneumonia, is greatest while dentition is going on; that is to say, during the first two years of life.

In Children of the following Ages.	Pneumonia was		Total.
	preceded by Catarrh.	not preceded by Catarrh.	
Under 1 year,	5	5	10
2	6	7	13
3	2	7	9
4	1	6	7
5	1	5	6
6	0	3	3
Above 6	0	2	2
	15	35	50

Previous attacks. There are some diseases which, after having occurred once, confer on persons an immunity from subsequent attacks. This, however, is far from being the case with pneumonia, for of 78 children who came under my care for inflammation of the lungs, 31 were stated to have had previous attacks of the disease; 21 once, 4 twice, 2 four times, and 4 were said to have had it several times, though the exact number of seizures were not mentioned. Of these 31, 10 were under two years of age, 10 between two and three, and the remaining 11 between three and six. Except in a few instances, these statements are necessarily founded on the reports of the mothers of the children, or of other non-professional persons, and are therefore open to error; but at any rate they approximate to the truth, and may the more readily be trusted from their coincidence with the facts published by M. Grasolle, in his work on Pneumonia.

From the detail of the *post-mortem* appearances produced by pneumonia, and the investigation of the causes which give rise to its occurrence, we pass next to the examination of the symptoms by which it is characterised.

Symptoms of Pneumonia. Idiopathic pneumonia presents some differences in its course, according as it is or is not ushered in by catarrhal symptoms. The latter being the most

usual may first claim our attention, after which any peculiarities may be pointed out which distinguish the form that supervenes on catarrh.

First Stage. Idiopathic pneumonia, unattended with catarrhal symptoms, is usually preceded for one or two days by a condition of general feverishness, exacerbated towards evening, with fretfulness, pain in the head, and great restlessness at night; or, if the child sleeps, its repose is unsound; it talks in its sleep, or wakes suddenly in a state of alarm. Cough comes on; at first short and hacking, but often it seems to cause no uneasiness to the child, and is so slight as hardly to attract the parent's notice. The thirst is considerable, the appetite impaired, the child showing distaste for solid food; or it begins to eat greedily, then suddenly leaves off, with the half masticated morsel in its mouth. The tongue and lips are of a florid red; the former is less moist than usual, and is generally coated in the middle with a thickish white fur. The bowels are generally constipated, and vomiting is not infrequent, especially in infants at the breast, who suck eagerly and by starts, then vomit the milk unchanged, and soon seek for the breast again. In them too, even in this precursory stage of pneumonia, the tongue is sometimes quite dry. If, while a healthy infant is sleeping, the mouth be gently opened, it will be observed that the tongue is applied to the roof of the mouth, and that respiration is carried on through the nares. So soon, however, as the lungs become affected, even when no other symptom exists than general febrile disturbance, and, perhaps, the vomiting above alluded to, the infant will be seen no longer to breath solely through his nose, but to lie with the mouth partly open, and drawing in air through it. This imparts to the tongue its preternatural dryness, and the same inability to respire comfortably through the nares causes the child to suck by starts. The infant seizes the breast eagerly, sucks for a few moments with greediness, then suddenly drops the nipple, and in many instances begins to cry. As the disease advances, these peculiarities in the mode of sucking and of respiration often become more striking, but it is at the onset of the disease that it is of especial importance to notice them, since they afford most valuable indications of its real nature. Their value too is so much the greater from their being independent of those accidental circumstances which may modify so many of the other signs of pneumonia. There is not always marked dyspnœa at this stage of the disease, and the frequency of the pulse and respiration is so much modified by position and other causes, that

at the commencement of pneumonia very great dependence could not be placed on them, even if the fretfulness of the little patient, or its fears which the presence of the medical attendant often excites, permitted them to be counted with accuracy. Auscultation, too, if alone relied on, might possibly not guide the practitioner at once to the true nature of the disease; for all the above mentioned signs may exist, associated even with very notable increase in the frequency of the respiration, and in older children even with pain referred to the chest or abdomen, without any other auscultatory phenomena than intense puerility of the respiration with, perhaps, an occasional sibilus.

It is not always, however, that the advance of the first stage of pneumonia is so gradual as has just been described, for sometimes a child who has gone to bed well awakes towards morning in a state of alarm, refusing to be pacified, with a flushed face, and burning skin, and hurried breathing, and short cough. This sudden supervension of pneumonia is not so often met with among infants at the breast as among children from two to four years old. The alarming nature of the symptoms usually induces the parents to apply at once for medical aid, and cases which have commenced thus tumultuously appear to be as amenable to treatment as those which seemed at first far less violent. Even in cases where treatment has not been at once adopted, the storm generally subsides in twenty-four hours, and the disease passes into the second stage without presenting any further peculiarity.

Second stage. The first stage of pneumonia for the most part passes gradually into the second, the symptoms of disturbance of the respiratory organs becoming by degrees more and more apparent. Infants who hitherto had had moments of cheerfulness in the early parts of the day, or about noon, now no longer wish to be removed from the cradle or from the recumbent posture in their nurse's arm; and older children have quite lost all interest in their play, they become drowsy, ask to be put to bed, and cry if taken up. The respiration is now evidently hurried, the abdominal muscles are brought into play to assist in its performance, and the *alæ nasi* are dilated with each inspiration. The cough has become much more frequent; it still retains its hardness, but lasts longer, sometimes coming on in paroxysms, and often seems to cause pain, the child crying when it comes on, and laboring to suppress it, an effort which appears only to make it last longer and return more often. The bright flush of the face and the florid tint of the lips have gone, but the heat of

skin continues. It is now a pungent heat, which becomes more sensible the longer the hand is kept in contact with the surface. It is often unequal, the trunk being intensely hot, while the extremities, particularly the feet, are cold; and on inquiry it will be found that the temperature varies much at different times. The face has assumed a puffed, heavy, but anxious appearance, and when the child is very young, or the pneumonia very extensive, the lips put on a livid hue, which is also very evident around the mouth, while the face generally is pale. Anorexia continues, but the first is generally very urgent, and, in children who are not at the breast, vomiting for the most part ceases. Infants who suck, still very frequently vomit the milk, perhaps owing to the urgent thirst they feel inducing them to suck too greedily, and thus overload their stomachs; since they generally vomit almost immediately after leaving the breast, while they do not reject small quantities of fluid given from a cup or spoon. It will also be observed that the respiration of a child is now greatly hurried by the effort of sucking, that he drops the nipple panting from his mouth, or has not breath sufficient to make the vacuum necessary to bring the flow of milk.

Auscultation now detects mucous or crepitant rhonchus at the lower part of each lung, in which situation the air enters less freely than elsewhere. There is much difference even in cases which appear closely to resemble each other as to the extent of lung through which crepitation is heard as well as in the character of the crepitation itself. Usually, however, the crepitation is confined to the infra-scapular region, and it is of that kind which is known by the name of *sub-crepitant*. The results of percussion of this stage are often not very marked, but frequently a diminished sonoreity of the lower parts of the chest, as compared with the upper, may be detected, and the impression conveyed to the finger is that of greater solidity below and above the scapula. This last sign is often very valuable, since it may be perceived at a time when the ear cannot clearly detect any actual dulness on percussion.

Third stage. In idiopathic pneumonia, unpreceded by catarrhal symptoms, death hardly ever takes place in this stage; but if the disease is left to itself, or if it is unchecked by the remedies employed, the second stage passes into the third; a transition which usually takes place in from twenty-four hours to three days. The respiration now becomes more labored, and though its frequency is sometimes diminished, it will be found to have become irregular; several short and

hurried inspirations being followed by one or two deeper, and at longer intervals, and these again by hurried breathing. The cough sometimes ceases altogether, or if not, it is less frequent and looser, since it is now produced by the child's efforts to clear the larger air-tubes from the accumulating secretions. The voice is often lost, the patients speaking only in a hoarse whisper. The face looks sunken, the extremities are cold, and though the surface of the trunk is still hot, yet the skin has often lost something of its previous dryness, and clammy sweats break out, especially about the head. The pulse is extremely frequent and small, and its beats so run into each other, that it is almost impossible to count them. The child is extremely restless, tossing about from side to side, as much as its reduced powers will permit, or it lies in a state of half consciousness, though sensible when spoken to, and fretful at being disturbed. If raised hastily from the recumbent posture, or if put to the breast, the great increase of dyspnœa which is immediately produced, shows how seriously the respiratory organs are affected. In many cases too the livid hue of the face and of the nails are further proofs of the great impediments which exist to the decarbonization of the blood. This condition seldom lasts above two or three days; for either life becomes gradually extinct, without the supervention of any new symptoms, or convulsions occur which are followed by fatal coma, or the child recovers from it for a few hours, only to suffer a second attack of convulsions, and a return of the coma, in which state it dies.

The disease, however, does not always terminate fatally in this stage, but a kind of imperfect recovery sometimes takes place. A diminution is obvious in the more alarming symptoms; the patient begins to express some desire for food as well as drink, and even has occasional gleams of cheerfulness. The cough, which had almost or altogether ceased, returns, but it is hard and hacking as in the second stage, and though there is no urgent dyspnœa, the breath is habitually short. The skin is hot, dry, and harsh; the tongue is red, dry and sometimes chapped, or presents small aphthous ulcers at its edges; diarrhœa is not unfrequent; the child wastes daily, and dies in the course of a week or two, worn out and exceedingly emaciated.

The peculiarities which distinguish that form of pneumonia which is preceded by catarrhal symptoms, may be enumerated in a few words. The disease in this case often comes on insidiously, and developes itself gradually out of the preceding symptoms without its being possible to fix the exact date

of its attack. At other times, however, there is a well-marked accession of fever and dyspnœa, and an aggravation of all the symptoms sufficient clearly to point out the time of the supervention of the pneumonia. The fever and heat of skin are less than in the other form of the disease, but the dyspnœa and distress are usually greater, and the face presents from the first a more livid hue. The cough is less hard, but it often comes on in paroxysms which greatly distress the patient; the respiration is more hurried and more irregular, and this irregularity comes on at an earlier stage of the disease. Mucous and sub-crepitant rhonchus are generally heard very extensively in both lungs, but the true pneumonic crepitation is unusual; and the inflammation being in these cases very often of the lobular kind, it may happen that no predominant affection of the lower lobes can be discovered. Head symptoms are more frequent; the patients' rest is disturbed, and they often mutter in their sleep, and have far more restlessness and jactitation when awake. Convulsions and coma more frequently precede death, and death occurs at an earlier period than in the other form of pneumonia.

Such is a sketch, confessedly a most imperfect one, of pneumonia in childhood. It may be well to attempt, by more minute details on some points, to fill up the numerous deficiencies in the portraiture. Sydenham indeed was able, within less space than this rude outline has already occupied, to draw pictures of diseases, so graphic and so true that all the observations of after years have found in them little to add, nothing to expunge. They, however, who can never hope to emulate so great a master, must content themselves with literally following his instructions, that "morborum phænomena clara ac naturalia, quantumvis minuta, per se accuratissime adnotentur; exquisitam pictorum industriam imitando, qui vel nævos et lævissimas maculas in imagine exprimunt."

The modifications in the character of the respiration in pneumonia, and the physical signs of the disease are of such importance as to merit most careful examination. Some acceleration of the respiration is almost always observed in cases of idiopathic pneumonia, but its degree affords no certain measure of the extent of the disease, nor will it be altogether safe to infer the absence of pneumonia, from the non-existence of dyspnœa. It is my belief, however, that marked dyspnœa will be found in all cases of lobular pneumonia, and also in all those cases of lobar pneumonia which have been preceded by catarrhal symptoms, or are associated with them.

It is often absent, or so slight as to be readily overlooked in the pneumonia which complicates diarrhœa, remittent fever, and other abdominal affections; as also in some cases where the thoracic symptoms are masked by the signs of cerebral or abdominal disease, constituting the *pneumonia larvata* of the old writers, in which, both for the aid afforded by auscultation, the true nature of the ailment would probably not be discovered. The frequency of the respiration does not in general continue progressively increasing from the outset of the disease to its fatal termination, but its maximum frequency usually coincides with that stage of the disease at which the crepitant or sub-crepitant rhonchus has attained its greatest extent, and sinks again when bronchial respiration and dulness on percussion indicate that the lung has become solid. When the attack of pneumonia is sudden and violent, and unpreceded by premonitory symptoms, the respiration sometimes reaches its greatest frequency within the first twenty-four hours; at a time when the auscultatory signs are scarcely developed, and when the ear detects nothing but intensely puerile respiration with occasional rhonchus or sibilus. In lobular pneumonia, which sometimes runs its course in four or five days, death taking place before any portion of the lung has become hepatized, the respiration may go on increasing in frequency until death. It is in such cases that I have observed the respiration more accelerated than under any other circumstances, and in one child so affected I counted 108 inspirations in the minute. Although the respiration often sinks in frequency on the supervention of hepatization it does not by any means return to a natural condition, but almost always becomes irregular. One or two slow inspirations are now succeeded by three or four very hurried, and it will be observed that now, while the help of the abdominal muscles is called largely into play, the lateral expansion of the chest is almost none. The marked influence too, of removing the child from the recumbent posture, and placing it in a sitting position, in causing great acceleration of the breathing, at once shows that the diminished frequency of the respiration is not the result of any favourable change. It appears then, that unquestionably valuable as are the indications furnished by the frequency of the respiration, there are many other points beside the mere number of inspirations which merit to be taken into account. Of greater value than the frequency of the respiration considered alone, is its frequency as compared with that of the pulse. Whenever with a diminution in the frequency of the respiration, the number of the

pulse sinks too, we have a sign of amendment on which the most thorough reliance may be placed. It is of importance, however, always to bear in mind, how easily both the pulse and respiration are accelerated in young children; they ought both therefore to be counted while the child is in the recumbent posture, and before it has been disturbed or alarmed by auscultation, or by the examination of any other symptoms. It is better, too, if on any occasion this order of investigation cannot be followed, or if the child is fretful and cries at any attempt to ascertain these points, not to persevere, lest we be led by so doing to form erroneous conclusions as to the condition of the patient.

Physical Signs. The physical signs of pneumonia are no less important in the child than in the adult, but the practice of auscultation in the former is attended with difficulties which do not occur in the latter. To some, indeed, these difficulties have appeared so great as to induce them to regard the application of auscultation to young children as impracticable, whilst others insist on the insufficiency of the physical signs to establish an accurate diagnosis between bronchitis and pneumonia, and allude to cases in which "though unquestionable results of pneumonia were found after death, there was no crepitant rale and no bronchial respiration."* The valuable monograph of MM. Rilliet and Barthez, however, has sufficiently proved the possibility of deriving most important information from auscultation, and it is my conviction that with a little tact and a good deal of patience, pneumonia may be detected by its physical signs in the child, almost as surely as in the adult. It is true, that infants will not tolerate the application of the stethoscope, and that they will seldom allow any examination of the front of their chest; but the whole posterior part of the thorax may almost always be examined, and such an examination yields results which are of the greatest value. In practising auscultation, I have usually found it best to have the child taken from its cot and placed in a half-sitting posture in its nurse's arm. It is now possible, kneeling by the nurse's side, to listen to the whole posterior part of the chest unperceived by the infant, who does not appear to be incommoded by the pressure of the head against its back in the same manner as it is by the application of the stethoscope. Percussion too, may in this way be made upon the finger of the other hand so as to afford very useful information. Even in cases where children are most fretful and

* Maunsell and Evanson, op. cit. p. 306.

alarmed, and resist every attempt at auscultation, something may still be learned; for during the deep inspirations which interrupt their violent cries, air will enter freely, and from the sounds then heard by the attentive ear it will be easy to estimate the extent and stage of the disease.

It has seldom happened to me to see cases of infantile pneumonia from their commencement. In a few instances, however, when the onset of the disease has been sudden and violent, children have been brought to me within a few hours after the beginning of the attack. In these cases I have been able to confirm the observation of Dr. Stokes, that an intense puerility of respiration in the affected part will be found to be the principal phenomenon. On visiting these patients on the following day after their general symptoms have been greatly ameliorated by depletion and the employment of other remedies, I have no longer heard this intensely peurile respiration, but in its place the mucous or sub-crepitant rhonchus.

Cases such as those above described form the exception to the rule, and usually children did not come under my notice until the sounds indicative of increased secretion were audible in the lungs. These are either the mucous or sub-crepitant rhonchus or the true pneumonic small crepitation.

Mucous rhonchus. The mucous rhonchus is heard in most cases where catarrh has preceded the symptoms of pneumonia; it is, moreover, often heard in other cases of lobar pneumonia in the neighbourhood of the sub-crepitant rhonchus which usually occupies the lower and posterior part of the lungs. It is further heard occasionally in situations where the respiration has a distinctly bronchial character, and it very often persists in cases where convalescence has taken place, long after the disappearance of every other sign of pulmonary affection. It would be too much to assert that a portion of lung in which mucous rhonchus is heard may become solid without giving rise previously to any other physical sign, but it is certain, from the statements of MM. Rilliet and Barthez, that this change does sometimes occur so rapidly that bronchial respiration shall be heard to-day in a portion of lung, where on the day previous mucous rhonchus was the only sound the ear could detect. Of the accuracy of this statement I entertain no doubt, though I can confirm it from personal observation, only in as far as regards the *extension* of bronchial respiration not with reference to its *actual origin* in a lung. Often, however, I have detected bronchial respiration on one day occupying a very small portion only of one lung, while mucous rhonchus was heard in its neighbourhood,

and on the following day much of this rhonchus has vanished and bronchial respiration has become well marked through twice or thrice its former extent. The occasional co-existence of mucous rhonchus with bronchial respiration is doubtless owing to the accumulation of secretions in the larger bronchi; hence, when heard under these circumstances it is an accidental phenomenon, and one of no value. The mucous rhonchus must be looked on as one of the least important of the physical signs of pneumonia, since it was present in thirteen only of fifty-one children under five years of age, in whom I carefully noted the symptoms furnished by auscultation. Nevertheless, greater value must, as MM. Rilliet and Barthez observe, be attached to it in the child than in the adult, since it is in the former, at least occasionally, the immediate precursor of bronchial respiration, while in the adult it is never the herald or any such grave occurrence.

Sub-crepitant rhonchus. The sub-crepitant is a sign of far greater importance than the mucous rhonchus, whether we regard the frequency of its occurrence or the consequences which follow it. It was heard in forty-two out of fifty-one cases; in thirty-one of which it either had not been preceded by mucous rhonchus, or if it had, that had ceased before the patients came under my notice. In thirteen cases it was associated with true crepitant rhonchus in some other part of the lung, or crepitant rhonchus succeeded it. In fourteen cases it was followed by bronchial respiration, and in six of these the bronchial respiration succeeded directly to it, without crepitant rhonchus having at any time been audible in those parts of the lung which became hepatised. Unlike the mucous rhonchus, it is not a transitory phenomenon continuing only for a few days, but it is a sign which, after the disease has once become established, persists until either the occurrence of mucous rhonchus in its place indicates that the lung is recovering, or the supervention of crepitant rhonchus or of bronchial respiration makes it evident that the morbid process is advancing unchecked.

Crepitant rhonchus. In twenty-two cases true crepitant rhonchus was heard, such as distinguishes the pneumonia of the adult. In fourteen cases it had been preceded by sub-crepitant rhonchus or was associated with it. In these instances it occupied a smaller extent of lung than the sub-crepitant rhonchus, and sometimes was confined to one lung while the sub-crepitant rhonchus only was heard in the other. Twice it succeeded directly to mucous rhonchus, and in six cases it was heard unattended either with mucous or sub-

crepitant rhonchus. In fourteen instances it was the immediate precursor of bronchial respiration, and was heard in parts of the lung near that in which the bronchial respiration was audible. The sub-crepitant rhonchus is sometimes a sign of the resolution of pneumonia, not so the crepitant, which I heard only when the disease was advancing, never at its decline, and its duration is far shorter than that of the sub-crepitant rhonchus, seldom exceeding two or three days.

It seems to be agreed on all hands that true pneumonic crepitation is of much less frequent occurrence in children under five years of age, than in the adult. Some writers indeed have gone so far as to deny its existence at this period of life, an opinion which MM. Rilliet and Barthez have shown to be erroneous. It does not, however, admit of doubt that the true crepitant rhonchus is decidedly less common in the child than in the adult, though it may not be easy to assign a satisfactory cause of this difference. Some value must probably be attached to the circumstance that while the frequency of the respiration in children is usually considerably increased under the influence of pneumonia, they no longer inspire so deeply as to fill the smaller air-vesicles, but the power of the respiratory muscles seems to be diminished, and the respiratory movements appear to be increased in frequency in order to compensate for their diminished energy. That some influence must be attributed to this cause is rendered further probable by the fact, that in the pneumonia of old persons, according to MM. Hourmann and Dechambre,* a similar absence of crepitant rhonchus is frequent. Another proof of this is afforded by the fact that in infantile pneumonia sub-crepitant rhonchus will frequently be the only sign perceptible until the child begins to cry, when in the deep inspiration which follows a fit of crying, the air that previously permeated only the larger air-tubes now enters the pulmonary vesicles, and at that moment distinct small pneumonic crepitation will be heard.

Bronchial respiration. Bronchial respiration was heard in 20 cases, in 5 of which it was detected in both lungs, in 7 it was heard only in the left lung, in 8 only in the right. It always existed in the infra-scapular region, though it was not by any means invariably confined to that situation. It sometimes supervened with great rapidity, occupying the whole of the lower half of one lung within twenty-four hours, and occasionally disappearing, as has been observed by Dr. Stokes

* Archives Générales de Médecine, 2e serie, tome xii. p. 45.

in the pneumonia of adults with similar rapidity, leaving no trace of its existence but large sub-crepitant rhonchus amounting almost to mucous rhonchus. Usually, however, it came on more gradually, occupying situations where crepitant or sub-crepitant rhonchus had been previously heard, and continued to be audible in cases which eventually terminated favourably for a week or even longer. Sometimes the bronchial respiration was unaccompanied by any other auscultatory sign in the same lung, but in the majority of cases sub-crepitant rhonchus was heard in its neighbourhood, and not unfrequently mucous rhonchus in its very situation. When resolution of the hepatised lung took place, I never heard a return of crepitant rhonchus, but sub-crepitant rhonchus in most cases became audible: in a few instances mucous rhonchus. In either case mucous rhonchus was eventually heard, and it often continued for many days after the lung had, in other respects, recovered its natural condition; apparently much as in the pneumonia of the adult, a prolonged expiration often persists for a long time after all the other signs of diseased action have disappeared. Bronchial respiration must be regarded as a very grave sign, since in 11 out of 20 cases in which it was heard, the disease had a fatal termination.

Results of Percussion. Though the results of percussion are decidedly less valuable than those of auscultation, yet this mode of investigation is by no means to be passed over as valueless. It is true that the great natural resonance of the chest in the young subject, the circumstance that both lungs are usually affected, and the restless fretfulness of the patient, render it less trustworthy than in the adult. Still a difference between the upper and lower part of the chest is generally appreciable long before bronchial respiration becomes audible; when bronchial respiration exists, dulness on percussion can always be detected, and even if it should be necessary to percuss with the utmost gentleness, so as scarcely to elicit a distinct sound, the finger is yet sensible of the presence of solid lung beneath. In cases, however, where the child cries even at the gentlest percussion, I think it better to give up the attempt, rather than by persevering in it to make the little patient dread the presence of his medical attendant, an occurrence which it is of extreme importance to avoid.

Diseases with which Pneumonia may be confounded. Before altogether dismissing the consideration of the symptoms of pneumonia, some notice must be taken of those errors of diagnosis into which the practitioner is most likely to fall. There are two stages of pneumonia, at each of which there

is considerable danger of mistaking it for some other disease, namely, just at its commencement, and after it has existed for some considerable time.

Hydrocephalus. Pneumonia in its early stage may be mistaken for incipient hydrocephalus. The vomiting, pain in the head, restless nights with occasional wandering in the sleep, and the constipated state of the bowels common to both diseases, lead to this error. The cough in some cases of pneumonia is so slight as scarcely to be noticed; perhaps no catarrhal symptoms ushered in the disease, and not unfrequently the child's complaints are of his head, and of nothing else. But still there are circumstances, which, wholly independent of auscultation, would lead the careful observer to discriminate accurately between hydrocephalus, or cerebral congestion, and pneumonia. The vomiting in hydrocephalus is extremely frequent in its recurrence, the stomach immediately rejecting even the blandest fluid, and the matters vomited often have a greenish tinge, and this irritability of the stomach sometimes continues for days. The sickness in pneumonia resembles that which sometimes ushers in an attack of fever; it is violent, but does not in general continue long. The bowels are constipated in both diseases, but the evacuations of a hydrocephalic patient are either white from the complete absence of bile, or more frequently of a dark mud colour. The tongue in hydrocephalus is usually less furred, it is always of a less vivid red, the pulse, though frequent, has not the character of fulness, the heat of skin is far less, the thirst is absent. If these indications, however, be overlooked at the commencement of the attack, and if auscultation, by which the error might still be set right, be neglected, it is probable that each subsequent occurrence will be misinterpreted, and that the real nature of the disease will not be understood until it is revealed by the *post-mortem* examination. More or less sympathetic affection of the head is seldom wanting in pneumonia, to confirm the preconceived, erroneous notion; while as the child grows worse the difficulties in the way of making a careful auscultation increase. Convulsions too sometimes come on, and for days before the fatal termination the cerebral symptoms may be far more prominent than those indicative of affection of the lungs.

Peritonitis. Pneumonia may likewise be confounded with peritonitis or enteritis. The general febrile symptoms are common to both diseases, the little patient complains of pain in the belly, and cries, or show signs of uneasiness if pres-

sure is made on the abdomen. The tongue is red, and in young children it often becomes dry from their lying with their mouth open; and poultices and leeches give at least temporary relief. It should, however, be borne in mind, that while pneumonia is a very common disease in childhood, acute peritonitis is one of very unusual occurrence. The child too does not select his posture with that great attention to guarding the abdomen, which he would display, if labouring under peritonitis. With reference to the complaint of pain in the abdomen, and its intolerance of pressure; it is of importance to remember that the statements of children with reference to the seat of pain are very vague, and that they frequently speak of pain in the belly when they mean the chest; while the impediment to the descent of the diaphragm occasioned by pressure on the abdomen, especially if this pressure is either sudden or considerable, will almost always excite expressions of uneasiness when the organs of respiration are in any way affected.

Dentition. Perhaps pneumonia is never so frequently overlooked as when it comes on in children during teething. It often happens among the poor that these cases are not brought to the medical practitioner until after the inflammation of the lungs has been proceeding for some days unchecked. Its early somptoms have probably been regarded merely as the catarrh which is incidental to children when cutting their teeth; and thus the parents, and sometimes too the medical attendant, allow the time for action to pass by unused. The disease in this case sometimes runs a chronic course, and its nature is further obscured by the tendency to diarrhœa, which exists during dentition, and which is now excited by the thoracic affection. This often becomes the most striking symptom, and all means are employed to suppress it, and to check the vomiting which generally attends it. These efforts, however, are unavailing, the child wastes daily, and its skin hangs in wrinkles about its attenuated limbs, while the abdomen becomes tumid, from the collection of flatus in the large intestines, and tender on pressure, and the tongue grows red, dry and chapped, or covered with aphthous ulcers. The cough now perhaps attracts notice, but its occurrence serves only to console the doctor with the belief that these symptoms have depended on phthisis, and that he has failed to afford relief because the disease was in itself irremediable. At last the child is worn out and dies, and great is the surprise to find no tubercle in any part of the body, no disease in the intestines;

but pneumonia with purulent infiltration in both lungs; a disease which ought to have been detected, and which probably might have been cured.

Treatment. I will now endeavour to sum up as briefly as possible what I think I have learned of the treatment of this disease by careful and unprejudiced observation. I do so, however, with great diffidence, for I feel that none but they who have grown gray in the practice of their profession, and who can preface their remarks by appealing to "lengthened meditation, and to the diligent and faithful observation of many years," are in a position to claim for their opinions on such a subject any consideration. I can only plead my excuse, in the words of Sydenham; if indeed there be not something of presumption in borrowing the expressions of that great man: "Cæterum quantacunque fuerint aliorum conamina, semper existimavi mihi vitalis auræ usum frustra datum fore, nisi et ipse in hoc stadio versatus, symbolum aliquod, utcunque exiguum, in commune Medicinæ ærarium contribuerem."

Depletion. The first rank as a curative agent in the treatment of idiopathic pneumonia, I would unhesitatingly assign to depletion. It is true indeed that on this, as on some other points, my experience differs from that of French writers who have studied the disease at the children's hospital at Paris. One of these gentlemen* has affirmed that depletion, whether general or local, invariably debilitates the organism, and accelerates the fatal event. True as this assertion may be of pneumonia occurring under the peculiar circumstances which that institution presents, it cannot be extended to it as it is seen in this country. In no case of idiopathic pneumonia which came at an early stage under my notice, have I had occasion to regret the employment of depletion carried so far as sensibly to affect the system. In children of two years old and upwards I have usually resorted to venesection; but in younger subjects have contented myself with the application of leeches. From a child of two years old I have been accustomed to take four ounces of blood, and to direct the application of four or six leeches beneath the scapulæ if the symptoms should appear unrelieved after the lapse of a few hours. The effects produced by one bleeding in some of these cases have been most striking; the violent symptoms have sometimes yielded at once, and recovery has gone on uninterruptedly almost without the employment of any other

* M. Becquerel, in the Archives Générales de Médecine, 1839, p. 471.

remedy. Of the frequent repetition of bleeding in *these cases*, whether from the arm or by leeches, I have no experience, but my conviction is that children *generally* bear repeated bleedings ill, and I therefore do not practise them. That form of pneumonia which developes itself out of catarrh appears to be least under the control of depletion; no instance having come under my notice in which the attack was cut short by its employment, though here too, local bleeding at the outset is often beneficial.

Tartar-emetic. The tartar-emetic is a remedy of great value in the treatment of pneumonia; but I can by no means subscribe to the unqualified recommendation of it by some French physicians in all forms and at all stages of the disease. I would rather say of it what Wolfgang Wedel says of opium, "Sacra vitæ anchora, circumspecte agentibus, Cymba Charontis in manu imperiti." The cases in which it has seemed to me to be of the greatest service were those in which the pneumonia developed itself out of previous catarrhal symptoms, or in which it supervened on measles, or came on in the course of hooping-cough. In such cases, antimony given in doses of a quarter of a grain to a child of two years old, repeated every ten minutes, till free vomiting is produced, and afterwards continued every two or three hours for forty-eight or sixty hours, has often appeared to be of the most essential service, and the preservation of the patient's life has seemed in several instances to be due to its employment. In pneumonia, too, which has not been preceded by catarrhal symptoms; if after venesection the respiration still continues as hurried as before, and the condition of the patient has been apparently but little improved by that measure, tartar-emetic has seemed to be extremely useful. I have been accustomed to give it in large doses, as a quarter of a grain for a child two years old, and to repeat it every two hours for twenty-four hours, and have observed its use to be followed by a great diminution in the frequency of the respiration, and considerable relief to the distress of the patient; and believe that when given in these cases it paves the way for the advantageous employment of mercury. In no instance, however, in which pneumonia had been neglected, so that the period for depletion was past, and in which distinct bronchial respiration was audible, have I seen beneficial results from the employment of antimony in large doses, as recommended by many French practitioners. It is true that the heat of skin will subside and the respiration will diminish in frequency; thus inducing a treacherous appearance of im-

provement; but the strength of the patient is seriously impaired by it, the occurrence of a comatose condition, or of what the Germans have called the paralytic stage, will be hastened, and the fatal event accelerated, as I have learned by sad experience in cases where I gave this mode of treatment a full trial. It is not meant, however, that after the supervention of bronchial respiration, antimony ought never to be given, but only that under such circumstances it has appeared to me that it should not be employed except in small doses and in combination with other remedies.

Calomel. A very high rank as a remedial agent in the treatment of idiopathic pneumonia must be given to calomel. I have been accustomed, after due depletion, to administer calomel in doses of two grains, combined with a quarter of a grain of tartar-emetic, and half a grain of Dover's powder, and to repeat it every four hours for children of four years of age; diminishing the antimony after the lapse of twenty-four hours, if distressing sickness were occasioned by it, but persevering in the use of the calomel, provided the patient were not over-purged, until the disease began to yield or the gums showed signs of the mercurial action. The latter occurrence has been by no means frequent, and in no instance have I met with dangerous mercurial affection of the mouth from the employment of calomel in these cases. It has always been my custom to suspend the use of calomel for twelve hours immediately on the first appearance of mercurial affection, and if after the lapse of that time the signs of mercurialization had not increased, to return to its use in smaller doses, and repeated at longer intervals, provided the symptoms of pneumonia were so urgent as to demand its continuance. I have oftener been harassed by the purging which calomel induces, though this may be in a great degree controlled by combining it with Dover's powder. Besides the inconvenience and danger attending over-purging, calomel has seemed in some instances, especially in infants, to occasion a very harassing nausea and vomiting, which have rendered its discontinuance necessary, lest the patients should suffer from the want of sufficient nutriment. In such cases I have had recourse to mercurial inunction, and under its employment recovery has taken place even where circumstances had seemed to warrant none but a most unfavourable prognosis. It is especially in cases of neglected pneumonia, where the time for depletion has long gone by, where the administration of antimony is evidently contra-indicated by the exhausted state of the patient, and where the existence of

diarrhœa forbids the employment of calomel, that the full value of this remedial agent is seen. I have employed it in the proportion of one drachm, rubbed into the thighs or axillæ every four hours, in children of four years of age. I have never observed salivation induced by it, but have seen the symptoms gradually diminish in severity during its employment, and the solid lung become once more permeable to air.

Stimulants. Usually, when the employment of mercurial inunction is indicated, the time for all directly depressing measures has long passed, and the best means of supporting the patient's strength become matter for serious consideration. No point in the treatment of the disease is more difficult than that of seizing the exact moment when the employment of stimulants becomes necessary, and no general rule for regulating their use can be laid down. It has, however, appeared to me to be seldom safe to withhold them when extensive bronchial respiration exists in a case on its first coming under the care of the practitioner, or when it has supervened in spite of active antiphlogistic treatment. If the patient, too, is beginning to be much purged; if the respiration is becoming more laboured and irregular, though diminished in frequency; aad if the pulse is becoming more frequent, and above all smaller and smaller, it is high time to resort to their use. Wine is as indispensable in such cases in the pneumonia of children as in that of the adult, and it may be necessary to give it even to infants at the breast. Ammonia may also be advantageously administered in this stage of the disease either in a mixture with the decoction of senega, or dissolved in milk which conceals its disagreeable pungency better than any other vehicle. If diarrhœa does not exist, strong beef-tea or veal-broth is the best form in which nutriment can be given; but if the bowels are relaxed, arrow-root or the *decoction blanche** of the French hospitals should be substituted for it.

Blisters. Blisters would probably be employed about this time in the treatment of pneumonia in the adult, but I cannot recommend their application in children. One objection to them arises from the time which elapses before they rise sufficiently, during the greater part of which they inflict considerable pain on the little patient, and make him extremely

* This, which is similar to the white decoction of Sydenham, is prepared by boiling half an ounce of hartshorn shavings, and the inside of a roll, in three pints of water, till reduced to a quart.

restless. The sores they produce when they cause vesication are sometimes very dangerous; they may even become gangrenous, and occasion the patient's death. Even if no such unfavourable results follow, they are nevertheless a source of constant annoyance to the child, at first from their soreness, afterwards from the troublesome itching which is felt when they begin to get well. Some pain is unavoidably produced whenever the dressings are changed, and the frequent repetition of this painful process sometimes makes the child, take a dislike to its attendants, who seem to it be the causes of so much suffering. It becomes suspicious of every one and quite unmanageable, while nothing is of greater moment than that a sick child should retain its fondness for its attendants during the whole period of its illness.

Mustard-poultices. It is quite possible that some of these objections may be obviated among the children of the wealthy by that care and those comforts which riches can always command, but I have been led, by the reasons above stated, to discontinue the employments of blisters in the treatment of pneumonia among the children of the poor. The same objections do not apply to the employment of mustard-poultices, and in many instances they have seemed to be productive of great good. They produce a much more speedy effect than blisters, and may be applied with safety over a much larher surface, hence they are often of signal benefit in relieving sudden accessions of dyspnœa; while from their not occasioning any breach of surface they may be reapplied as often as the emergencies of any case require.

Of the subsidiary medicinal agents, such as ipecacuanha and the class of expectorants, nothing need be said; but there are one or two points in the general management of the disease not altogether unworthy of notice.

General management. It is desirable, in all cases of pneumonia, at all severe, that infants should be taken from the breast, and that the mother's milk should for a time be given them from a spoon. This is of importance on two accounts; partly because the thirst they experience induces them to suck overmuch (hence it is well that barley-water or some other diluent be given to them frequently instead of the milk, in order that they may quench their thirst without overloading their stomach); partly, because the act of sucking is in itself mischievous, since, as must at once be perceived, it taxes the respiratory functions to the utmost.

A second important point is never to allow the children to lie flat in bed or in the nurse's arms, but to place them in a

semi-recumbent posture in the arms, or propped up in bed. By so doing respiration is facilitated, since the diaphragm is relieved from the pressure of the abdominal viscera, and that stasis of the fluids in the posterior parts of the lungs is prevented, which has been shown by French writers to be so prejudicial to infants or children labouring under pneumonia.

The only other point to which I will allude is, that when pneumonia has reached an advanced stage, or has involved a considerable extent of the lungs, the children should be moved only with the greatest care and gentleness, lest convulsions should be brought on. Whatever may be the explanation of this occurrence, the danger is by no means an imaginary one, for I have seen instances in which children have been seized with convulsions immediately on being lifted somewhat hastily from bed and placed in a sitting posture; and on this account I have referred to what might seem to be a trivial matter.

Bulletin of Med. Sciences.

Poisoning by Arsenious Acid ultimately detected by Examination of the Liver.—To the Editor of the Lancet.—Sir,—Having been for some years past an attentive reader of your valuable Journal, and having received much pleasure and instruction from its perusal, I consider myself bound to communicate to it, in return for my enjoyment, what little information it may be in my power to contribute.

The case which accompanies this note was to me highly interesting, and presented several facts that were worthy of reflection. Perhaps the most important is the discovery of arsenic in the liver in great abundance, after numerous experiments upon the stomach and its contents had failed to detect it; thus illustrating the important medico-legal fact, first promulgated by Orfila, that this poison *often disappears from the stomach by absorption, and becomes separated from the blood of the portal system by the liver*, and that it might be detected there, even after all evidence of its presence has elsewhere vanished. I regret that no opportunity occurred of examining the urine, since the bladder was empty; but evidence existed of inflammation of the mucous membrane of the pelvis of the kidney and ureters. Could that have resulted from the action of this poison? Believe me to be, Sir, your's most obediently,

William Bird Herapath.
Pupil of the Bristol Medical School.

Old Park, May 10, 1843.

Post-mortem appearances. The stomach and its contents; various white matters found therein; great inflammatory action on its mucous surface. Effusion of coagula. The ovaries encysted, and the Fallopian tubes closed and dilated into serous sacs. Local inflammation of the peritoneum. Fluidity of the blood in the heart's cavities. Congestion of the lungs. Chemical experiments on the fluid contents of the stomach, on a portion of that viscus, and on the various white matters and specks found in it, and upon the blood of the right side of the heart but little arsenic found so far; arsenic found in the liver, in much greater quantity.

June 14th, 1842.—Jane Burns, ætat. 31, having died suddenly at her lodgings, and under suspicious circumstances, Mr. Grindon, the coroner, ordered a post-mortem examination of the body to be made. Mr. Ormerod, having been the medical man in attendance upon the deceased, was instructed to perform it, and having called upon me to conduct the chemical examination of the case, I requsted to be present at the opening of the body, which we found in an upper story of a lodging-house kept by a Mrs. Brown, living in Newfoundland-street, St. Paul's. Its exterior presented no marks of violence; it was much discoloured in the dependant portions by the gravitation of blood. It was fat and plump, and in very good condition, and presented the appearance of a party dying in the prime of life. Death could only have recently taken place, since the limbs were still rigid. The body was opened in the usual way, and the contents of the thorax and abdomen were exposed.

The lungs were full and prominent; they did not collapse upon allowing the pressure of the air to exert its influence; not emphysematous; no tubercles seen, if we except a small cretaceous one in the base of the lower lobe on the left, the size of a pea. The lungs were engorged with blood almost as if asphyxia had caused death; upon cutting into them it flowed out in quantities. The black pulmonary substance was deposited in its usual situation; two or three small black bodies, as large as sparrow-shot, were seen in the interlobular fissures, probably enlarged lympatic glands blackened by this substance.

The pericardium contained only a teaspoonful of serum.

The heart large and flabby; right auricle and ventricle distended with black fluid blood; this was collected for experiment, about six ounces were obtained; the left cavities also

contained blood, but not to the same extent, this was also preserved with the other; no coagula on either side. Valves: lining membranes all healthy.

The pleuræ contained several ounces of serum, but this was, through an oversight, not saved for examination.

The abdominal cavity and its viscera.—The peritoneal surface of the small intestines had a beautiful pink tinge, similar to the hue of a maiden's blush rose; several vessels very distinctly marked. Omentum fat, but healthy; upon pulling up the small intestines (a few coils of the ileum) from the cavity of the pelvis, several bands of organised false membranes were found connecting them with the uterus and with each other; these bands were highly vascular and organised; the peritoneal disease was local, extending only to about the five or six inferior convolutions of the ileum, and were consequently found on the right side. The cœcum was *not* affected in this way, nor its appendix. Other intestines healthy in external appearance.

The stomach was next removed, having previously placed ligatures upon its œsophageal and pyloric orifices, removing about an inch of the œsophagus and duodenum at the same time. Upon opening this organ it was found to contain about half a pint of thick grumous fluid, yellowish-red in colour, some half-digested portions of food in it, too much altered to be recognised. These contents were preserved in clean bottles and sealed. The mucous surface of the stomach presented several appearances worthy of notice; its greater cul-de-sac, and a portion of the greater curvature, had a dark livid-red colour; upon closer examination, a clot of blood was seen to have been effused upon its surface and also beneath the mucous membrane. The rugæ were very distinctly marked, and many of them deeply injected and highly inflamed; its pyloric portion was scarcely affected, but the mucous follicles were enlarged, and numerous *white specks* were sprinkled over its surface. Upon raising the coagulum, the mucous membrane was highly inflamed and much softened, being easily torn by the nail. Throughout every part of the stomach these white specks were seen, but they were more numerous in the foveolæ or pits between the rugæ. Some *patches* of white matter were observed upon the coagulum before spoken of, some were also scattered upon the suface of the lining membrane of this organ; but a *peculiar white, shining,* (apparently) crystalline body was seen everywhere diffused. (There was another white body present, but this was *not seen* at this time.)

The stomach was now carefully placed in a new bladder, and reserved for re-examination at more leisure.

The duodenum was removed and examined, but contained only a little fluid, and its appearances were not much worthy of remark. The jejunum contained some fluid and gas; about five ounces were preserved like those of the stomach. One or two red spots upon its mucous membrane, but considered unimportant. The ileum was not examined through its whole length; those portions which were opened presented little worthy of remark, even the membrane of that part whose peritoneal coating was so inflamed, was perfectly healthy. The large intestines not minutely examined. The liver was gorged with blood, but healthy in structure; about half a pound was preserved for subsequent examination. Soon after this I found upon my finger a distoma hepatica, or fluke, it was still alive, and had the usual greyish colour of those found in the liver of the sheep; no others could be seen.

The pelvic viscera were next examined.

The finger inserted into the vagina reached the neck of the uterus without difficulty; it was large and well marked; the os tincæ large and elongated; although not pregnant, she might have had a child; she could not have had *more*, as the skin of the abdomen presented none of those seams so well known as the results of pregnancy.

The uterus was of the normal size and unimpregnated; upon its exterior the remains of the false membranes were found which had connected it with the convolutions of the ileum. The Fallopian tubes and right ovary were rather remarkable, and appeared as if they contained an extra-uterine conception. The whole contents of the pelvis were, therefore, taken out with care for closer examination. The bladder was empty. This was to be regretted, as valuable indications might have been obtained of the presence of arsenic in the urine. The kidneys were congested with blood, and the calyces contained some muco-purulent fluid, and apparently the mucous membrane was inflamed, as it was highly vascular. Was this the result of gonorrhœa or of arsenic? no other evidence of the former disease existed. I am inclined to the latter opinion, but cannot prove its truth.

To return to the genital organs. The uterus upon being opened was healthy and empty; the mouth admitted the handle of a small scalpel easily. The Fallopian tubes were both encysted, the fimbriated extremities being adherent to the recto-uterine fold of peritoneum on the left, but to the enlarged ovary on the right. Their ostea-uterina were oblite-

rated, the adhesions were probably old, as they were organized. The right tube being opened, about two or three drachms of yellow serous fluid escaped; very little fluid flowed from the left, scarcely a drachm, but no fœtus in either. The left ovary contained several cavities; one seemed to communicate with the peritoneal cavity, as an opening was found having rounded edges and not appearing as if cut, this cavity would have lodged a pea; the internal surface was slightly yellow; all the sacs were empty and communicated; three or four were found.

The right ovary was at first, from its feel and appearance, supposed to contain an extra-uterine conception, and it was opened rather reluctantly; it evidently contained a fluid and a solid; this was rounded and not well defined. Upon making a puncture, about two ounces of reddish serum (sero-sanguinous fluid), escaped, and a solid body with a shaggy surface was seen blocking up the orifice; this was, therefore, enlarged and the body turned out; it was found to be a coagulum of blood (?) homogeneous in texture, but yellowish within. The walls of this cyst were lined by a false membrane, upon the removal of which the serous shining surface of the cyst appeared. The whole ovary was as large as a tennis-ball. The peritoneal coat presented the remains of the false membranes attached to it, thus holding the ileum down firmly, as before stated. The walls of the ovary only one-sixteenth of an inch thick, and *none* of the healthy structure of the ovary remained.

Did the peritoneal inflammation result from the rupture of a similar cyst in the left ovary and the escape of the fluid into the peritoneal cavity? I am inclined to think that it did. It is clear that she could not have been pregnant, and doubtful if she ever would have been again, had she lived.

The woman is a native of Ireland; her maiden name was Maggs. She married a man named Wright, who died; she then married a sergeant (now in India), but she formed a disreputable connection with a man living at Cathay, and was in the habit of meeting him every Saturday night, at a public house, and he then usually accompanied her home; but on the 11th instant they quarrelled, and he did not go home with her. On Sunday morning she was found ill, having previously written some letters with pen and ink borrowed from her landlady, together with a prayer-book; some time after this a little girl was sent up stairs to fetch these things back and found the door locked on the inside. By-and-by the landlady heard a noise up stairs, and found the deceased very

ill, and groaning terribly. She fetched her neighbour, and then the woman asked for water, and soon afterwards was sick, and "vomited a large quantity of white stringy fluid," which they foolishly threw away. To a medical man who was sent for she complained much of her heart, and appeared in great agony, rolling and tossing in her bed, but he could gain very little information from her. She either would not or could not answer his questions. Before any medicine could be prepared she died. In her room he found in her reticule a small paper packet (with "arsenic, poison," written on the outside), containing a white powder.

She had only been in the house a week, and upon taking the lodgings had stated that her husband lived in Bath, but came home on Saturday nights, and would then pay the rent. She added that she believed herself to be *enciente*, but the post-mortem examination clearly proved that this suspicion was unfounded. It was evident that she could not have been recently delivered. It is doubtful whether she *ever* had a child, although the uterine orifice was not in its virgin state. The disease in the ovaries and Fallopian tubes would prevent her from becoming pregnant. Although it is not very probable that this was a congenital malformation, yet it must have existed for some time, perhaps for several years. The peritoneal disease must have been old too, since the membranes were organised, and no recent lymph or fluid was effused.

The congested state of the lungs and the engorgement of the right side of the heart, would seem to point to asphyxia as the immediate *precursor*, if not the *cause* of death.

But the gastric symptoms must have been acute with such extensive disease; the inflammation was intense, blood and coagulable lymph having been effused, together with softening of the mucous membrane, in patches, all being evidences of acute gastritis, and appearing to point to a corrosive poison as the proximate cause. The abundant presence of white particles, &c., in the stomach, seemed to support this conclusion.

Under these circumstances I commenced the chemical examination with alacrity, expecting to find it in abundance, and in every portion used.

I first assured myself, by reducing the metal, that the substance *contained in the paper* found in her reticule was arsenious acid; again oxidising it, and obtaining the green arsenite of copper, the yellow sulphuret of arsenic.

A. I took a portion of the fluid contents of the stomach.

About four ounces were evaporated to dryness (during the boiling a strong smell of toasted cheese was perceptible); it was next mixed with nitre, and deflagrated in a pure silver dish. When all the animal matter was destroyed, and the dish and contents allowed to cool, it was treated with water until dissolved, then filtered. To the clear solution acetic acid was added in small portions, until a slightly acid reaction appeared evident to litmus paper, carbonic acid being evolved; a current of sulphuretted hydrogen gas was then passed through this. A brownish-white was thus obtained. The fluid was now boiled to expel the excess of hydrosulphuric acid and to assist the coagulation of the precipitate. It was now set aside, in order that the precipitate should fall. Next day the supernatant fluid was removed by the pipette, and the precipitate dried. It was then treated with a little water, and got into a smaller compass, and again allowed time to subside. This water was again removed by the pipette, and I again dried the precipitate. Having now well dried some charcoal and carbonate of soda, small portions of these substances were mixed intimately with half of the precipitate, and introduced into Berzelius's reducing tube by means of a small funnel, and then, upon cautiously applying heat, so as to expel a small portion of water (which always remains notwithstanding all your care), and having removed this by means of a small coil of bibulous paper introduced into the tube for that purpose, the bulb of the tube was heated to bright redness; a little sulphur rose or sublimed. Beneath this ring of sulphur the merest trace in the world of a *dark ring* was perceptible, but this was not sufficient to be able to say that it was arsenic, although a *very suspicious* circumstance. (I preserved this.) The second portion, treated in the same way, gave similar results. Upon endeavoring to pass this portion through the usual series of tests for arsenic in solution, no results were obtained.

B. In the intervals occurring in the progress of this experiment I took about two or three inches square of the *pyloric extremity* of the stomach (here, be it observed, the white specks were most numerous) and dried it in an oven, having previously washed its surface, to obtain the white particles. The washings were evaporated to dryness, and treated precisely in the same way as the last, but not the slightest trace of arsenic was perceived.

C. The solid portion of the stomach from B was treated exactly in the same way. The residue was subjected to the

same process as in A: a slight smoky tint only obtained by reduction, but *far* from being conclusive. I preserved this as a specimen.

D. During the spare time, whilst these experiments were on hand, I took four or five ounces of the blood, evaporated to dryness, constantly stirring it, and treated this by the same process. Had I been able to forsee the *results* of these experiments I should not have tried this, as these were still *in umbrâ*. I commenced this merely as an experiment from curiosity, as all the previous experiments could not be finished until the next morning. This was treated precisely as before, and in the morning it was reduced, but nothing rose, a ring of sulphur only subliming,

E. Having so signally failed in all these trials I began to feel annoyed; for being morally certain that arsenic had caused death, why was it not found? The process had proved successful over and over again in my hands, and my father has been eminently successful with it. Then why was it fallacious here?

I now searched for other poisons, and as the mineral acids were likely bodies, these formed the indices for experiments, but none were present.

Then it occurred to me to examine more closely the substances still adhering to the surface of the stomach. Had all these white specks, &c., been arsenic, not the least difficulty could have happened with regard to them.

First. Multitudes of small, white, shining, crystalline globules, were present, but of a very *small* specific gravity, and having a silky lustre. Placed on a Stanhope lens they were very transparent, and not unlike granules of starch; but tincture of iodine gave no indication of that substance. They were insoluble in acetic acid; ammonia, boiling, partially dissolved them, as did potash. Were they fatty grains? I think so. They were everywhere seen upon the stomach, more in the pits than on the rugæ, *floating on the fluid.*

Second. A more opake white substance, found near the pyloric end, more like arsenious acid, but when placed on the Stanhope lens they proved to be soft and plastic, were not gritty between the nails; when placed in a small tube and heated they intumesced, charred, and smelt strongly of toasted cheese. A crystalline white body sublimating, this was not soluble in water, and the water, when tested for arsenious acid, gave a *blue* precipitate with the ammoniacal sulphate of copper; they were not arsenic, neither did they contain any.

Third: A third white substance; white patches: these were

apparently fibrinous. Took a portion of the coagulum with these patches upon it, boiled in strong nitric acid, again and again, until no red fumes of nitrous acid evolved. then evaporated to dryness, A fatty body left; upon adding ammonia, an orange, soapy compound; this was then treated with acetic acid and sulphuretted hydrogen, as before the precipitate attempted to be reduced, but nothing sublimed.

Fourth. I scraped a portion of the mucous membrane with a spatula; the mixed body, &c., were acted on by nitric acid, as in the last experiment, and neutralised by ammonia. Upon dissolving by the aid of heat, a yellowish soap, as before; upon testing this solution by the copper, silver, and sulphuretted hydrogen tests, something like the precipitates were obtained. However, as these could not be depended upon, as the animal soap was present, this was deflagrated with nitre, as in A (after previous evaporation to dryness), and being treated as before, nothing rose.

Fifth. I was now obliged to attend the inquest. Having only suspicions of the presence of arsenic, I gave my evidence in a guarded manner, and having detailed these results, requested an extension of time; but the coroner and jury thought, notwithstanding my having stated my belief that it was present, that nothing would be gained by the delay, especially as the evidence all tended to prove that she had committed suicide. They therefore returned a verdict of died "from inflammation of the stomach." Upon my return home I again set to work, and having poured a fine stream of water upon the stomach so as gently to wash off these light particles, so embarrassing, I took it into the sunlight, and carefully went over the whole mucous membrane (of the stomach) with a lens, inch by inch, By this means several small grains of a white body were obtained, very different from those previously found, appearing as opake white specks, very sparingly scattered over its surface and closely adherent to it. Their margins were more defined than any yet seen, its edges being sharp. Being observed amongst the patches of different white substances previously found, they stood somewhat boldly forward, inviting attention. Having, after a good deal of trouble, picked out with the point of a pin and the help of the lens about twenty or thirty of them, placing them one by one, as I did so, in a watch-glass with a little water, some fell down, as heavy bodies would do, others swam and floated away. At length, having sufficient of the heavy ones, I decanted the fluid and lighter particles, washing those remaining in the watch-glass again and again with a little cold wa-

ter. They were then dried and mixed with carbonate of soda and charcoal, as before, and having introduced the mixture into a reducing tube, upon heating it in a short time the metallac arsenic arose in its usual splendour. This I preserved. I again went over the stomaeh, and obtained a second portion of these particles. Some were preserved as specimens, others were reduced and then subjected to the usual tests, as additional evedence of their nature.

F. Not being very well satisfied at having missed this body in the fluid contents of the stomach, I now took the remainder of the contents of the stomach and intestines, about two-thirds of the original quantities found; they were treated as in A. Upon subliming this, I obtained a *slight* indication of metallic arsenic, a ring of fly-powder appearing; the metallic ring *was not* perceptible; it would do as a corroborative evidence only.

G. Took half a pound of the liver; having cut it into small portions and introduced them into a tubulated retort, they were boiled with concentrated nitric acid; violent effervescence took place from the escape of carbonic acid, nitrogen and nitrous acid gases, more and more acid being added from time to time; the fibrinous masses first disappeared; being converted into a fatty substance, this gradually disappeared also, leaving a deep orange-coloured solution; this was evaporated to dryness, and the operation again recommenced as before. When the decomposition had been pushed as far as possible without danger of the explosion which so often occurs towards the end of this process, it was stopped by slow evaporation to dryness again; the residue was dark chocolate-coloured, and weighed about two drachms.

H. This residue was now boiled in a solution of carbonate of potass; effervescence took place, an orange-yellow solution being formed, and the same dark-chocolate residue remaining. This was proved to be sesquioxide of iron with animal matter.

I. The solution was now separated by filtration, and slightly acidulated with acetic acid and a current of sulphuretted hydrogen passed through it: then boiled to expel the excess of this gas and allowed to stand for a time in order that the precipitate should subside; decanted the fluid and washed and dried the precipitate; part of this was now introduced into the reducing tube, as before, when upon heating it an *abundant ring* of metallic arsenic sublimated. This was preserved as a specimen, another experiment gave similar results, and farther, for by oxidising the ring of metal and dis-

solving in water and applying the tests for arsenious acid in solution, the characteristic precipitates were produced.

K. The residue from H, upon being farther examined, was found to contain no arsenic, but consisted of phosphate of lime, sesquioxide of iron, animal matter, and a portion of silica.

This operation, namely, the destruction of the animal matters of the liver by means of nitric acid, is a long and tedious process; yet it is an interesting one, and, by its results, fully repays one for the trouble, for in this case we see what minute portions of the poison remained in the organs where it is usually sought for. The *fluid* contents contained the merest possible trace, certainly not near enough to enable one to speak positively of its presence, although it is possible to prove the existence of one-thousandth part of a grain of this substance, and very probably even a much less quantity. It is true that by *great care and trouble* several little granules of the poison were obtained *from the coats* of that viscus, but the operation takes too much time to have allowed me to use this process before the inquest. Again, the *best* plan would have been, undoubtedly, to have destroyed the whole stomach by the same process; but the case appeared so clear, and such masses of evidence seemed already present, that this caution was apparently unnecessary.

The discovery of arsenic in the liver, when such small traces exist in the stomach and its contents, appears to be important; highly so, indeed; in fact, giving a means of finding this substance when all other processes have failed; and in *no case* of poisoning ought this viscus to be slighted at the *post-mortem* examination, the same care being used in removing it as in taking out the stomach and other viscera, for in the liver *the whole evidence* might exist.

Now to account for the sparing evidence of poison in the *fluid* contents. Pereira, in his "Materia Medica," vol. i., page 376, says, "Water, boiling, dissolves one twenty-fourth part of its weight of arsenious acid; on cooling it retains one-fortieth part of its weight; but by *cold digestion* it only retains one-thousandth or one five-hundredth of its weight. This is stated upon the authority of Mr. Taylor, in 'Guy's Hospital Reports,' vol. ii., p. 83." Could this have been the cause? I believe that it was. There is no evidence as to *how* the poison was taken, but it might have been swallowed in cold or tepid fluid. It was certainly suspended in fluid, since some granules of it still adhered to the stomach.

Onyxis—the nail grown into the flesh.—M. Gerdy does not approve of the avulsion of the nail as a means of curing this painful affection. The nail soon grows again, and with its growth returns the disease. Neither does he approve of the plan of contracting the point of the nail. Matters soon become as bad as ever. Neither is the plan of proceeding, according to which the diseased cushion of parts to the outside of the nail, although superior to the other two, to be greatly commended. The continual pressure upon the pulp of the toe by and by forces a new portion of flesh into contact with the nail, and renewed pain demands renewed interference from the surgeon. "The true and rational method of dealing with the affection," says M. Gerdy, "is to remove at a stroke, and obliquely, even beyond the middle of the pulp of the toe, the lateral and inferior parts which rise to suffer pressure from the edge of the nail, and to ulcerate under it." *Lond. and Edin. Monthly Journ. of Med. Sci.*

Dr. M'Cormac on Prolapsus Ani.—Reflecting on Dupuytren's procedure, it occurred to me that the same result might in a measure, at least while the child was at stool, be secured by careful manual traction. I immediately stated my views to the intelligent mother; she entered into them at once, and promised, if possible, to carry them into effect. According, when the child went next to stool, the skin exterior to the anus was drawn to one side by means of the fingers extended around. The little girl submitted to this with some reluctance, and complained that she could not evacuate her bowels. She was encouraged, however; a stool was obtained; from that day and date, now a month since, the bowel has not once descended. The stools, which previously were from two to four every day, have become much fewer, as well as of a more formed consistence and natural colour; while the child's health, spirits, and strength, are in other respects much ameliorated. There is now no prospect of the disease ever returning; the little girl requires comparatively little attendance; her mother, in fact, is only required to stand by, and in a short time, it is to be hoped, her onerous and anxious ministry will wholly cease.

As prolapsus ani is a very common affection coming frequently under the notice of every practitioner, and hitherto most difficult to remedy, this painless and bloodless mode of

treatment, which, it is reasonable te suppose. would be equally efficient in other cases, in relieving the sufferings of helpless childhood, and lessening a mother's cares, seems deserving of attention.—*Dublin. Journ.—Medical Examiner.*

Antidote for the Bichloride of Mercury.—M. Orfila, having lately performed a series of experiments, with a view to determine the value of proto-sulphuret of iron as an antidote for corrosive sublimate, has published, in the "Journal de Chimie Medicale," the results at which he has arrived.

1. That the proto-sulphuret of iron completely destroys the poisonous properties of corrosive sublimate, if administered in sufficient quantity *immediately after* the ingestion of the poison.

2. That, like the other most approved antidotes for this poison, it is inefficacious, unless given within about ten or fifteen minutes, by which time the deleterious action of the poison is generally sufficiently powerful to cause death.

3. That, although the sulphuret decomposes the corrosive sublimate more powerfully and completely than *albumen*, and, therefore ought to be preferred in all cases where it can be administered *immediately*, or in *a very short time*, after the poison; yet it will almost always be found that *albumen* may be more advantageously resorted to than the sulphuret of iron, in consequence of the latter being kept only by the pharmaceutists, and much time being, therefore, lost before it can be administered, while white of egg mixed with water, which is everywhere to be obtained, may be given without delay.—*Prov. Med. Journ.*

The Botanical Labours of Mutis.—A sketch of the labours of the extraordinary botanist of New Grenada, termed by Linnæus, "Phytologorum Americanorum Princeps," from the pen of Humboldt, translated by Colonel Wright, late governor of the province of Loxa, was read. It was Mutis who first made known the true characters of the genus Cinchona, and who discovered the quinquina tree in the woods of Tena, near Santa Fé de Bogota, and also in the route from Honda to Villeta, and at the Mesa de Chinga. The cinchona tree is now to be found on the whole length of the Cordilleras, at

an elevation of from seven hundred to fifteen hundred toises, upon an extent of about six hundred leagues from La Paez and Chuquisaca, to the mountains of Santa Martha and Merida. Mutis has the merit of being the first to distinguish the different species of cinchona, some of which, with downy petals, are much more active than others whose surface is smooth. He has proved that the active species, whose properties vary with the organic structure and form, should not be indiscriminately employed. Nor were the labours of Mutis confined to the genus Cinchona, most of the genera Alstonia, Vallea, Burmadesia, Escallonia, Manettia, Acæna, Brathys, Myroxylon, Befaria, Telipiogon, and many others, published in Linnæus's supplement, are due to the sagacity of the botanist of Santa Fé. Among the useful plants in medicine and commerce described by Mutis we must reckon the Phytrochia emetica, or ipecacuanha of the river Magdalena; the Toluifera and the Myroxylon, which yield the balsams of Tolu and Peru; the Winteria Granadensis, and the Alstenia theaformis, which latter furnishes the tea of Bogota, the infusion of which cannot be too strongly recommended to travellers who remain any length of time exposed to the rain of the tropics. To Mutis, also, is owing the discovery of the Mikania Guaco, the most powerful antidote to the bite of venomous serpents; it is of the family of the Compositæ, and is known in its native country by the name of the Vejuco del Guaco. Zoology, the atmospheric currents, and mathematics, also engage a portion of the attention of this extraordinary man. He never lost sight of the great problems of the *physique* of the universe. He travelled over the Cordilleras, barometer in hand. He determined the medium temperature of those table lands which appeared like islets in the middle of the ærial ocean. His taste for the physical sciences, and active curiosity directed to the development of the phenomena of organisation, and meteorology, maintained the empire of his mind to the last moment of his life. Of him, Linnæus truly said, *Nomen immortale quod nulla ætas unquam delebit.*

London Lancet, July 1, 1843.

Edinburgh Professors.—An evil is complained of at Edinburgh as contributing yearly to diminish the number of graduates at that university. It is said to be perfectly evident to all who are attending in the Scottish capital that of two of

the professors, the suns, although they blazed for a long series of years with much brightness, are now near their western horizon. The fact is mentioned in Edinburgh without any invidious feeling, because there are two parties always to be considered on these occasions, the professors and *the students*, —the teachers and *the taught*. Dr. Hope has long been one of the ornaments of chemistry in this country, and his discoveries most valuable; but his powers of lecturing and distinct articulation now fail him; and although his name will be remembered as long as science exists, his ability as a *lecturer* is now nearly extinct. Dr. Monro, too, has also lost his power of demonstrating, and has of late years acquired a manner of lecturing which is considered to have had a very depreciating effect on the attendance at Edinburgh. It is an object of serious inconvenience at any university when it has not at its disposal a retiring fund for professors. It is not desirable that such men as Drs. Hope and Monro should be exposed to the consequences which in their classes they have experienced during the last two or three years. Those professors have, in fact, no longer any command over them. As to the students who now avoid the university,—the Irish students, more especially, have gone to other universities—on inquiring the reason of any one who is acquainted with the fact, the reply is, "It is because the classes of Drs. Hope and Monro are imperative on students graduating, for it was the cheapness of college classes, the small expense of living in Edinburgh, and the fame of the professors, all combined, that rendered the university so desirable a place for many of the pupils. Amonst the students, generally, the remedy is considered to consist either in Drs. Hope and Monro retiring, or for the senatus to declare that their lectures shall no longer be compulsory."—*Ibid.*

New Astringent Preparation.—By digesting rhatany in sulphuric ether a brown extract is obtainable, perfectly soluble in distilled water, and when placed on the tongue giving a sensation of great astringency, followed by heat and dryness. This extract, invented by a Mr. Tissier, of Lyons, has been employed with success in that city in passive hæmorrhages, particularly those consequent on non-contraction of the uterus, as after prolonged labours and miscarriages. It has also been used with advantage for leucorrhœa, blennorrhœa,

gleet, &c. The dose in which it has hitherto been employed is a tablespoonful of a mixture composed of from five to ten grains of the extract in six ounces of some appropriate vehicle; in leucorrhœa, topical injections are recommended of from two to five grains of extract in a pint of barley-water. The presence of this preparation in the stomach gives rise, generally, to a sensation of heat in the epigastrium, though this rarely proceeds so far as to become painful; great thirst, and a pulse often as full as in gastritis, also prevail. These symptoms are, however, transient, and readily quelled by lemonade or other mild drinks. Should the injection irritate the urethra too greatly, it is only necessary to suspend its use for a short time.—*Gazette des Hôpitaux*, June 6th.—*Lond. Lancet.*

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LOUISVILLE, SEPTEMBER 1, 1843.

TRAVELLING EDITORIALS.

We wonder if any portion of the literature of the Augustan age was *brought forth* in August? If so, the *labour* must have been *tedious*, and the *offspring* half ASPHYXIATED. We presume that the books which have fallen *still born* from the press, were written in this month. To travel, and observe, and ask questions and make notes, and think, and indite editorials, in a moist and stagnant atmosphere, with the mercury at 90°, is positively too bad. We would earnestly advise all who look up to us for recipes to guide them in writing things fit to be read, to avoid the dog-days; in which advice we coincide with the great critic:

> "The dog-star rages, and beyond a doubt,
> All bedlam or Parnassus is let out."

We might, in addition to this fresh and erudite quotation, cite other authorities in support of our position, but prefer to establish it by the character of our editorials.

Goitre.

Twelve months ago, we were wandering along the northern extremity of the Ohio and Erie canal, as we are now upon its south-

ern. We there saw a number of cases of goitre, and heard of many more. Not a few of them were in their first stages, and the testimony of the physicians with whom we conversed, went to show that the malady is decidedly increasing in frequency. We find the same thing here. Indeed, within the last four or five years the cases in the valley of the Scioto have greatly multiplied. The patients are nearly all women in early life. Our brethren treat the disease with iodine, administered without and within; and, in general, speak encouragingly of its effects. On the remote causes of this malady, we shall not venture this muggy afternoon to offer any speculations; but in place of them, will respectfully solicit, from all who may read this article, whatever facts they can give us concerning the disease, and the geological conditions under which, any where in the west, they have observed it to occur.

Return of Intemperance.

The Washington temperance excitement has greatly abated in the southern part of Ohio. This is no more than might have been, and was, indeed, (by all discerning men) anticipated from the beginning; for all excitements, even political fermentations, religious revivals, and medical broils, are paroxysmal. Among the drunkards who reformed, we have met with some relapses, but the number is not great. They are sufficient, however, to afford an unenviable pleasure to those who did not change their habits, and to the cold-hearted and incredulous lookers-on, who, throughout the glorious reformation, found happiness in thinking and announcing that *they* had nothing to do with it. Should every intemperate man who has subscribed the pledge, within the last four years, return to the bottle, there would still remain to society benefits of sufficient value to render the excitement of those years, one of the most important social events of the present century. Wherever we have wandered for the last eighteen months, we have seen evidence of this, in modifications of manners and customs and habits which are likely to endure, and exert a permanent influence on the greatest vice of society. An example of this, is presented in a "Circular," designed for travellers, issued in 1841, by Mr. D. Talmadge, of Lancaster, Ohio, one of the most respectable stage proprietors of the West. From his nine "General Rules," we extract the following:

"Every driver addicted to drunkenness will be immediately discharged upon my becoming acquainted with the fact."

"Every driver is strictly prohibited the use of ardent-spirits, while driving upon his route, under penalty of being discharged at once."

Whoever saw such salutary regulations as these, in past times? We can all remember when a *majority* of stage drivers were addicted to drunkenness! Mr. Talmadge addresses a few words to passengers, some of which we are tempted to transcribe.

"A custom sometimes exists among passengers of inviting drivers to partake of a social glass, as an evidence of their approbation and respect, and often it is complied with from mere unwillingness to refuse. This thing though small in itself, may lead to the formation of a habit which will end in drunkenness, bringing ruin upon the unfortunate drivers, entailing misery and want upon his family. A trifling present, which would procure some small necessary of life for wife or children, would much better answer the purpose intended, while it would not form or strengthen a passion for strong drink."

Let no one smile or fret at our transcribing this paragraph. It embodies, in simplicity of language, a momentous principle—the influence of the higher upon the lower classes of society. As long as that influence is badly directed, intemperance, and the diseases of body and mind which it originates, will be kept up. Physicians are men of influence, and we call upon them. every where, to exert the moral power with which their profession has endowed them in the suppression of one of the most prolific causes of disease, which exists, or ever has existed, among men.

Medical Police of Jails.

Every county jail in the United States, has its physician, but as yet these officials have done little, we believe, towards improving the cleanliness, ventilation, and police of these receptacles of the dissolute. Our attention has been turned upon this neglected, but not unimportant subject, by a sheet of printed "Rules for the Regulation and Government of the Jails in the Eighth Judicial District of Ohio," drawn up by its President Judge Hanna. By a late law of the State, the presiding judges are made the inspectors of the county jails, and authorized to direct their police. We shall copy from Judge Hanna's rules, such as relate more immediately to the health of the culprits, in the hope they may be adopted elsewhere:

"The Sheriff shall furnish each and every room, when occupied, with a broom, a bucket, pitcher or jug, containing pure wholesome

water for drinking, and a wash bowl, bason, or other suitable vessel for washing the face and hands therein, with a sufficiency of soap and clean water for that purpose, a towel, and combs for the head; and shall require every prisoner to wash his or her face and hands, and comb his or her head, every morning before breakfast; also, to make his bed and sweep his room.

"He shall cause every prisoner having a beard, to be shaved at least once a week, and the hair of males to be cut as often as may be necessary for cleanliness and comfort.

"Every prisoner shall be required to change his, or her under-clothes, at least once a week.

"When any prisoner, except a debtor, has not a sufficiency of clothing to keep him, or her, comfortable and clean, it shall be the duty of the Sheriff to furnish the same, and cause the clothing of all prisoners (debtors excepted) to be washed and cleansed as often as may be necessary.

"Debtors shall in no case be confined with idiots, lunatics, insane or other prisoners. Prisoners charged with offences or crimes, shall not be confined with those convicted, males with females, colored with white prisoners, or youth with old offenders, where there are a sufficient number of rooms in the jail to admit of their separation.

"The Sheriff shall supply a bed-stead and bed with suitable clothing, for every two persons confined in jail, cause the sheets thereof to be changed and washed once a week, and the other clothes as often as necessary—the beds to be aired and sunned at least once a month, and where straw or chaff is used, cause the same to be emptied and filled with a fresh article at least once in six months; all the rooms to be sufficiently ventilated.

"No spirituous, malt, or fermented liquors, shall in any instance be allowed to any prisoner unless prescribed by the physician in actual attendance on the prisoner.

"The Sheriff shall at suitable times, at the request of any prisoner or prisoners, permit the clergy to visit the prison for instruction or religious exercise.

"He shall furnish each room, occupied by a prisoner capable of reading the same, with a copy of the Bible, and see that the same is not abused, injured, or destroyed."

The physician who is employed to attend on a prison, should not regard his duty as discharged by prescribing for the sick. Properly understood, it embraces an attention to every thing which can effect the health and reformation of the convict. But neither is to be promoted by personal and domestic filth, damp walls, intemperance, crowded cells, and foul air, against the whole of which the medical officer should enter a solemn protest. D.

Portsmouth, Ohio, August 1843.

TRAVELLING EDITORIALS AND TRAVELLING EDITORS.

We perceive that our contemporary of the *Boston Medical and Surgical Journal*, has been writing travelling editorials. We had the pleasure of meeting with him a short time since, among what a familiar of ours calls the "madcap levellers of the west;" and, faith, we were taken all a-back (we *must* perpetrate a sea phrase now and then) by seeing such a *veteran* in medical journalism looking *so* young. Not, indeed, that we had any sort of idea that he was "sightless, and old, and melancholy;" but we certainly *did* expect to see the crow's feet about the eyes, and mayhap something of a "frosty pow." We comfort ourselves for such a disappointment by reflecting that he will come up to our expectations by and by, and that meanwhile we shall see him here again next summer. May he live a thousand years, and may his shadow never be less! C.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY

OCTOBER, 1843.

ART. I.—*Contributions to Morbid Anatomy.* By BENNET DOWLER, M.D., of New Orleans.

Chemistry offers one of the best illustrations of the great importance of a scientific NOMENCLATURE; a nomenclature full of meaning, easily learned because based on analogy, and sent forth to the world along with each new chemical product, and this too, in most instances, in advance of popular, unmeaning names. When a name is once fixed, especially if it be a short one, in vain may the learned labor to substitute for it a Greek, Latin, or even another English name, however absurd may be the former—however descriptive may be the latter. "All nomenclature," says Mr. Herschel, "must be a balance of difficulties, and a good short *unmeaning*

name, which has once obtained a footing in usage, is preferable to almost any other." (*Nat. Philos.*)

Melan-orrhœa is (if I might be allowed to coin a word) better than the inelegant and contradictory phrase, *purging* black *vomit; melan-emesis*, less tautological than *vomiting* black *vomit; melan-orrhagia*, less circumlocutory than discharges of blood and black vomit. Take another example: in yellow-fever, in the early stage, there is a pain in the frontal bone, above the eyes, never in them even when exposed to the strongest light, sometimes extending to the temples, but seldom, if ever, diffused through the head. This, though erroneously called head-ache by careless patients, and writers, is not strictly such. Now this pain is peculiar, not from its intensity, but from its location, a single finger placed above the eye-brows usually covering its seat, and it might be expressed, without circumlocution, by the term *frontalgia;* pain along the entire spine, might be called *spinalgia;* pain in its cervical portion, would by the same rule be named *cervalgia;* in the middle portion *dorsalgia;* in the lower, *lumbalgia:* more especially as *neuralgia* and several other words of this family are becoming anglicised. The shortest description for *lumbalgia* would, perhaps, in plain English, be this: pain in the small of the back, directly in the bone. However convenient such names may be, the history of medical nomenclature shows that they will, at last, be found to give place to a simpler and more vernacular technology, even among professors of the healing art. In many cases this tendency is advantageous. Who would wish to change the English and French names of yellow-fever, for any of those learned terms which Greek and Latin scholars have invented? The former name implies no false theories of malignancy, of putridity, of typhus, &c., but originates in a fact of constant occurrence in fatal cases, namely, a yellowness of the skin, of the subconjunctival, the adipose, and cellular tissues. The Spanish name, *vômito prićto*, is less characteristic, inasmuch as black-vomit is far from being constant in this fever, though even this name is, perhaps, more correct than the classical:

for black-vomit matter is generally found upon dissection, either in the stomach, or intestines, though in many, perhaps a majority of cases, none had been vomited.

The elaborate and classical nomenclature of the late, and very learned, Dr. Mason Good, after blazing comet-like in the medical heavens, is fast disappearing in the deeps of oblivion, a work which he evidently thought contained the elements of its own immortality—a work, as he declares, "not merely designed as a manual for the student, or a text-book for the lecturer, but a book that might stand on the same shelf with our most popular systems of Natural History." (*Prelim. Dis.* p. vii.) The same quotation, in which he bewails the short-lived glories of Darwin's Zoonomia, which, according to its author, was destined to "stand like a rock amid the waste of ages," might now be applied equally to his own case:

> "O blindness to the future!—kindly given,—

with the following additional lines from the same poet:

> "Ev'n he whose soul now melts in mournful lays.
> Shall shortly want the generous tear he pays:"

since Dr. Good's Nosology too, "must fall like those he sung."

I trust that I shall not be accused of a desire to innovate, in offering to the consideration of dissectors the following plain names, with some account of the anatomical characters which they represent, without entering for the present, the more elevated range of pathological inquiry to which they might have a tendency. I am not aware that all these lesions have been designated and introduced into works on anatomy, though I believe they are entitled to such distinction, or at least to a hearing. It is not my intention to discuss their practical value, still less to attempt by deductive reasoning to trace their consequences and bearings through the extended realms of pathology.

I do not insist upon the adoption of the following names, nor venture, in all instances, to use them in my own descriptions, however convenient they might be, in order to avoid

tedious circumlocutions. It is hoped others will substitute names better, shorter, and more descriptive of the *things* designated. It requires a celebrated name to establish new names. Andral is an instance: a part of his pathological nomenclature spread with celerity from the centre to the circumference of Europe, as well as to the furthest verge of America.

I.—Cellular Hyperæmia, or Cellular Spleenification of the Extremities.—*Ante-mortem History:*—The skin natural in color, but tense; the depressions among the muscles obliterated; the limb rounded; extension, as well as any kind of motion, more or less painful, semi-flexion affording relief; the limb is but little increased in size: these symptoms seldom causing much complaint.

Anatomical Characters:—The interstices of the cellular membrane uniformly infiltrated with a semi-carnified blood, firmer than the spleen, a little variegated in some instances with gray or buff color, presenting when cut, a smooth surface, free from serosity and bloody exudations; sometimes affecting only a portion of the limb, sometimes the whole of it, sometimes all the limbs, though never any portion of the trunk so far as I have seen.

The following extracts, taken from my manuscript chapters on the morbid anatomy of yellow-fever, will illustrate this lesion: J. M., born in New York, musical instrument maker, aged twenty-three, on the third day after his arrival at New Orleans, took the yellow-fever. Body of medium size, muscular and adipose tissues finely proportioned, &c. [His senses and his susceptibility to external impressions continued good until fifteen minutes before he died. Daily history omitted.]

Oct. 7th, 1842.—Has no fixed pain; but can, at any time, produce pains in his limbs by certain motions, as extension and elevation. The limbs, which are rounded and somewhat tense, he keeps semi-flexed.

Oct. 12th, at 11½ A. M., after a slight effort to vomit for the first time, he complained that his feet were becoming

cold, at the same time expressing an opinion that he would recover, and in a few seconds after expired tranquilly. The day before his death, the uneasy sensation in his limbs existed, as at first, whenever he moved them.

Dissection fifteen minutes after death:

Body, warm, except the feet; muscles contractile, firm, well developed, and slightly increased in redness, &c. The cellular tissue, even in the deepest recesses of the muscles of the arms and legs, was loaded with semi-organised blood, which, when cut, resembled smooth, dense jelly, interwoven with a tissue like spleen or placenta—free from serosity or bloody oozings. This deposit occupied more than half of the cellular tissue, excepting the right arm, which was less affected.

There was no hæmorrhagic appearance in the bowels or in any other organs. The blood was natural in color, and in consistence, coagulating firmly as usual.

There can be no doubt that this lesion occurred early in his malady, certainly five days before death. Not wishing to encumber this paper with histories of a similar character, I proceed to another lesion, which, though it is identical in color, differs in its location, shape, and consistence.

II.—Button-shaped Sanguineous Indurations.—*Anatomical Characters:*—These bodies, less organised than the spleen, firmer and darker than coagulated blood, resemble dense jelly in consistence, occupying and being intersected by the submucous tissue of the stomach and intestines—of the urinary and gall bladders, varying from minute points to the size of a common button, which they resemble in shape. Conceive the eye or thick part of a button as commencing in the mucous membrane, and the body as extending back through the submucous tissue, the muscular coat moulding the outside, and you will have a correct idea of their general configuration. This lesion happens oftenest in the stomach, and is not uncommon, at least, in yellow-fever. In its solidity and well-defined shape, it differs greatly from those passive exudations which take place in the last stage of fever, when the inject-

ing power of the circulation must be too feeble to force the blood and compress it into the tissues as above described. This lesion has been found in subjects even where blood-letting had been carried to a state bordering on *anæmia.*

In the descending scale, as connected with this subject, I think it by no means ridiculous or unimportant to mention certain appearances, if not strictly lesions, of the skin in the living, and in the dead subject, commonly called *petechiæ*, but which generally are, in my opinion, neither more nor less than

III.—Mosquitoe Petechiæ or Ecchymoses.—These are found only on such parts as are exposed to these insects. They are of no small value as indicants of a hæmorrhagic diathesis or tendency. The same may be said of that dark, purplish-red discoloraton which is apt to appear to considerable extent around the neatest orifice in the arm in venesection, though in neither case do we meet with sanguineous concretions as in the last lesion.

Mosquitoe Petechiæ I have met with in several intense forms of remittent and congestive fevers, during the present month (July 13th, 1843); every exposed part being thickly dotted with circumscribed, red spots, seldom as large as a grain of flaxseed, the color receding by pressure as in erysipelas, but returning almost instantly after the removal of the finger. These dottings occur sometimes in bowel affections, as diarrhœa, dysentery, and cholera morbus. In healthy infants, recently born, the mosquitoe bite causes spots difficult to be distinguished from those abovedescribed. Pringle, (*Dis. of the Army*), says that *petechiæ* appear thickest upon the breast and the back, less on the legs and arms; and, adds he, "I do not remember to have observed any upon the face." (Obs. on Jail or Hospital Fever, p. 262). In mosquito petechiæ, the contrary happens. If the patient's shirt be of very thick linen (as in the Charity Hospital of this city) no spots will be found on the trunk, except at the opening in the bosom, unless the body be exposed, as in delirium.

De Haen, nearly a century since, characterised typhus as a petechial fever (*frebris petechialis*), and it is now considered

by Louis and Chomel, as possessing no other pathognomonic character. Since pathologists attach so much importance to petechial eruption, it is desirable to discriminate its varieties as accurately as possible. It will be found, in the South at least, as I incline to believe, that those spots called *petechiæ* are owing to the bites of insects, in almost all instances. The advanced stage of fever, the prostration of the vital forces, and a hæmorrhagic tendency, are circumstances generally connected with this appearance. These bites, however, seem to produce no uneasy sensations as in healthy persons: upon the latter, the mosquitoes sometimes produce irritating effects not a little formidable, through nearly half the year, in this city; though they are far less virulent than Capt. Ross represents them to be in the arctic regions, at the 67° N. lat. (2d Voy., 1829, p. 35).

Lastly, upon this branch of our subject, is there nothing morbid in the firmness, tension, plumpness, and redness of the muscles so common in yellow-fever subjects? Would not an apoplexy, or engorgement of the interstitial and capillary circulations, or either of them, appear probable under such circumstances? Blood-letting may be carried to great extremes, causing general *anæmia*, without discharging this fine red color of the muscular tissue.

IV.—Cord-like Consolidation of the Intestine.—*Anatomical Characters:*—The large intestine chiefly, though not exclusively, is the seat of this lesion; the cæcum, colon, and rectum, are found firm, round, bloodless—strong, tenacious, elastic, white—often resembling in color the breast of a boiled chicken, or prepared tripe; the intestinal cavity obliterated, not admitting a body as large as a quill without forcible dilatation; dessication of the mucous membrane; all the coats much but equally thickened; the external dilatations, notchings, and puckerings, as well as the internal sacculated pouches obliterated, leaving the longitudinal muscular stripes distinct; the consolidated portion probably diminished in length; in most cases empty; sometimes containing solid pebble-shaped fæces, from the size of a hazel-nut to a hen's egg, or even to

a goose's egg. These indurations, when numerous, give the large intestine the appearance of a string of onions, being of the consistence and color of half-dried or baked yellow clay, closely surrounded as with a skin, by the intestine, emitting little if any odor.

If we deduct for the apparent loss in the mucous, serous, and sanguineous fluids natural to the parts, it is probable that the bowel has suffered no loss of weight by this lesion. This change, which is a very acute one, since it happens for the most part in fevers lasting from three to four days, is quite different from atrophy, or collapse, which happens to a muscle or organ from long disuse of its natural function. It does not appear to be occasioned by mere emptiness, a condition to which the large intestine is often subject in sickness and health—distention appearing to be its natural condition—differing in this respect from the urinary bladder, which habitually contracts or dilates more or less, according to the quantity of fluid which it may contain: on the contrary, the large intestine when most empty of fæcal accumulations, is most distended with its peculiar gases, at least, such is often the case in the dead body.

There can be no doubt when this lesion is established from the valve of the cæcum to the anus, as is often the case, that defecation cannot be effected; and, therefore, when purgation is essential to life, this lesion must be highly dangerous or absolutely fatal. From the universal stricture, dryness, and, sometimes, almost cartilaginous firmness of the intestinal walls, enemata, or gum-elastic flexible tubes would alike fail in many cases to render the canal pervious for the purposes of defecation. When we reflect on the anatomy of the colon, including that enormous triangular bag called the cæcum at its origin, its great size, its constant gaseous distention, its thinness (being naturally the most attenuated of all the bowels), it appears difficult to account for this lesion. Do the muscular fibres of the intestines undergo a rigidity and contraction, analagous to tetanus or lock-jaw in the external muscles? Is this an intestinal tetanus, so intense as to sur-

vive the relaxing power of death itself? From the thickness, muscularity, and diminished calibre of the rectum, one might expect that this portion of the great intestine would be more completely closed than any other; but, the contrary happens. Two or three inches above the anus, small portions of enemata are sometimes found.

Without entering upon the pathology of this lesion, I may be allowed to remark, that I have heard a number of yellow-fever patients affirm that, during their whole illness, they never had a single defecation or stool. I have known several, both in convalescent and fatal cases, who, after free purgations during the first day, had no further defecations, or such, only, as I have often found in this lesion, and usually described by the patient as small dry pills. Some of these patients had taken quinine. Is not this salt a constringer of the bowels? I regret that my attention has not been arrested by this inquiry in time to afford me a sufficient number of observations upon which to form a satisfactory opinion. The advocates of the quinine practice would do well to inform the medical public on this subject, as nearly all other modes of treatment, in which quinine is only an occasional element, are too complex to afford exact and unmodified results.

Though this lesion is not positively known to have any connexion with the quinine practice, yet, such practice may increase the morbid alteration, instead of diminishing it.

The above description, it is believed, will apply to a majority of cases in which this lesion is found, though it will, as might be expected, transcend the appearances in some instances: with these exceptions, the picture I have drawn, will not, I trust, be chargeable with exaggeration.

The ante-mortem history or symptoms of this change, though little known, will doubtless be ascertained to a greater or less extent before long. A timely and well conducted course of purgation, with enemata or lavements, assisted with suitable instruments, would probably prevent this affection altogether. Enemata though greatly and generally overrated by physicians, by patients, and by the public, as I humbly

conceive, might be expected to act beneficially in preventing or lessening this lesion.

Case.—Large man from Louisville—the cæcum, colon, and rectum contracted to the size of the thumb, scarcely pervious to the scissors, containing nothing but a handful of small, dry, inodorous, friable, black crumbs or scybala, from the size of a pea to a hazel-nut; the whole of the large intestine being firm, strong, elastic, thickened, blanched, bloodless, and scarcely moist within. I add the following facts for comparison: mouth and gullet full of blood; stomach small, blanched, four ounces of black-vomit, without any bloody tinge; jejunum, blood and black-vomit; the upper third of the ileum gray chylous paste, the residue black-vomit again.

V.—Diminished adhesion of the Hepatic Coats.—*Anatomical Characters:*—The coats bloodless, and non-vascular; on making an incision both the cellular and serous envelopes peel off with facility, in flakes as large as the hand, like the skin from a boiled potatoe, scarcely ever bringing any portion of the parenchyma of the liver; sometimes, the serous coat alone is non-adherent, separating from the cellular coat, which latter maintains its natural adhesions: these membranes appear nearly transparent, very thin, without loss of tenacity, free from blood-vessels, diminished in moisture; the substance of the liver appearing, when denuded, either soft, dry, and brittle, or firm, dry, and brittle, and nearly destitute of blood. If we imagine a liver half-boiled, then macerated, and afterwards partially dessicated, so as to weaken its membranous adhesions, at the same time preserving their strength, and discharging their blood—we will probably have an apt illustration of this lesion, a lesion by no means infrequent or unimportant in the pathology of the liver.

May not the life of the hepatic coats cease, a considerable period before the death of the general system, thereby causing diminished adhesion, loss of moisture, non-vascularity, and anæmia?

VI.—Oyster-like degeneration of the Gall-bladder.—For this comparison I am indebted to a suggestion made by

Dr. C. A. Luzenberg, of this city. This lesion is very common, at least in yellow-fever. The gall-bladder is usually whiter, firmer, tenser, tougher, and larger than an oyster of common size; its walls, from a quarter to half an inch thick, consisting of innumerable threads or fibres, like raw cotton, intersecting a dull-white, semi-opaque, gelatinoid, semi-organized substance, having but little or no serosity; the cavity of the gall-bladder, usually containing a thick and apparently pure albuminous substance, without a trace of bile, though in some few cases, grass-green and dark tenacious bile, and biliary concretions from the consistence of soft sugar, to hard aloes, exist simultaneously with this lesion; the serous, cellular, and mucous coats, free from vascularity, as well as the adjacent parts of the liver; in a few cases button-shaped, though minute, sanguineous extravasations are found under the serous coat—more seldom a faint, bloody tinge in the deposits of the cellular coat.

This lesion does not resemble œdematous infiltration, and is unaccompanied with anasarca in any part of the body. Its firmness of texture and its destitution of serosity show that it is not a dropsy. The hypertrophy of the walls of the gall-bladder, is often attended with a contraction of its cavity; the latter sometimes contains from one to two ounces of albumenoid matter, nearly as transparent as water.

The following instance of this lesion, is taken from a robust subject, from Louisville: it is not so fully described as many others; and the biliary concretions must be regarded as infrequent, though sometimes met with in the anatomy of this malady: The gall-bladder enlarged, walls thickened to half an inch, densely infiltrated with a solid albuminous or gelatinoid substance, giving the whole a dull-white oyster-like appearance; its cavity contained about one ounce of liquid exactly like the white of an egg, free from bile; also, twenty irregular stones, of a dark color, sinking in water, crumbling on firm pressure like fine aloes, being brittle, not staining the hand. On exposure to the air their brittleness increased, so that in falling they broke with a smooth fracture; insoluble

in water; some weighed eight grains each. [Now, after nearly two years they are gray and firm, and have an astringent metallic taste.] These concretions had no nuclei or strata. The mucous coat of the gall-bladder, natural, except its white color.

The interstitial deposite resembles fibrinous or lymphy concretions, rather than serosity. In color, not in consistence, this lesion resembles *œdema of the glottis*, which may be referred to for the purpose of illustration. The following case I saw through the politeness of Dr. Wederstrandt: A young man who died, suffocated, September 11th, 1842, presented the following appearances upon dissection, the same day: The posterior fauces, the glottis, epiglottis, and larynx, presented a uniform white, non-vascular tumefaction, free from ulceration; the sub-mucous tissue in some places, half an inch thick from serous infiltration, being semi-transparent, free from redness, the lips of the glottis touching each other, closing the air passage; the substance of the lungs infiltrated with serosity and with gas.

In the above described change of the gall-bladder, the serous infiltration, the spongy, and the doughy texture of anasarca, are absent. The coats and ducts of the gall-bladder, together with the neighboring portions of the liver and its coats, are free from vascularity, redness, congestion, and swelling. The condition of the liver, usually accompanying this lesion, so far from favoring the idea of serous infiltration, presents more or less dessication, with, in many cases, diminished cohesion of its parenchyma. Whether it be an inflammatory or a non-inflammatory change, I will not undertake to say. If regarded as the former, it affords another instance of the difficulty of defining inflammation, seeing redness, vascularity, &c., are wanting.

May not the absence of the accustomed bile, prove a source of irritation to the gall-bladder, thereby laying the foundation of this alteration. Though, this may be only a sub-lesion, a wheel in a wheel, yet, as it sometimes nearly ob-

literates the cavity of the bladder and its ducts, it might possibly by mechanical obstruction do infinite harm.

VII.–Yellow, brittle dessication of the Liver.–*Anatomical Characters:*–Dull-yellow, cork, beeswax, or gingerbread color; parenchyma brittle and bloodless, and softened, with more or less dryness, especially in its thicker and more central portion, as if the liver had been boiled,—its parenchyma deprived of blood, and suppleness; breaking somewhat like shortened bread, though appearing destitute of any oily matter; sometimes moderately indurated, but differing from the hard, granulated, hob-nail, or cirrhose liver; never being accompanied, as the latter almost constantly is, with dropsy of the abdominal cavity.

This lesion, whether it belong to inflammatory or non-inflammatory changes, or be the effect of paralysis in the vessels concerned in the capillary circulation, must be regarded as very important in its pathological bearings.

The two most remarkable circumstances in the ante-mortem history of this lesion, seem to be, first, the absence of bile in the fæcal evacuations; and, secondly, tenderness in the liver when pressed in any direction. In order to avoid the cardia, pylorus, duodenum, gall-bladder, great nerves, and their ganglia and plexuses, and the pancreas resting on or near the spine, we may, after relaxing the abdominal muscles, direct the pressure upward against the diaphragm or upwards and outwards against the ribs and right side; or place the fingers on each side of the liver pressing them together without forcing it against the spine. With respect to bile, let it be borne in mind, that when the patient is attacked with fever, his bowels are sometimes loaded with healthy fæces, which accumulate in the large intestines, and there remain without much alteration until death, though in the mean time digestion and the secretion of both healthy and morbid bile, may have totally ceased. There seems to be an increase of heat in the integument, radiating from the liver. These, though the best diagnostics of this lesion that I know of, are nevertheless very unsatisfactory, and therefore, in the absence of

better proof, I may be forgiven for drawing a little from what, perhaps, may be considered imagination. May not this lesion result from fever in the hepatic system (analogous to idiopathic fever in the general system); attended with a kind of semi-combustion, a condition somewhat like approaching spontaneous or idiopathic gangrene, resembling in cohesion or brittleness vegetable matter, such as masses of hay, straw, &c., after being heated to a degree short of perfect combustion.

In this lesion the large vessels are generally filled with blood, perhaps congested so far as the vena portæ and its principal branches are concerned, while the substance of the liver appears bloodless, indicating a paralysis or failure in the capillary and interstitial circulations to a great extent, and referable to an era in the malady considerably anterior to death.

Without adopting the conclusions of the ingenious Liebig, who seems to put pathology, physiology, therapeutics, and the animal kingdom, into his crucible, in order to furnish under the imposing name of animal chemistry, a panacea for the uncertainty of medicine, we may remark that one of the properties which he ascribes to the bile, is that of keeping up the animal heat, by a sort of combustion, "by presenting carbon and hydrogen in a soluble form to the oxygen of arterial blood;" that from seventeen to twenty-four ounces of this "vehicle of carbon and hydrogen," this fuel called bile, are secreted daily into the bowels to be taken up into the circulation, disappearing in the form of carbonic acid and water: now as the bile ceases to be secreted from the liver, the Liebigian theory would seem to suggest that this enormous amount of concentrated fuel, after neutralising the oxygen present in the liver, might like a smouldering fire carbonise the organ in which it originated or was retained, thus committing a sort of pathological suicide, by preying upon itself.

If we view the liver as the great organ of depuration of the general system as well as of the hepatic system, it may, like the poisonous snake which bites itself, die from its own

poison—from a morbid retention of its own secretions, when suddenly arrested—functional causing organic alteration.

In this lesion does not the liver die in advance of the general system? May not its brittleness, its paleness, and the diminished adhesion of its coverings, have some connexion with such a cause?

VIII.—Serous compression or congestion of the Brain.—Considering the mass of names, and especially of synonymes, under which our science groans, it is desirable not to add any more to the ponderous load, without good reason. The above named lesion cannot, however, be ranked under that protracted disease called hydrocephalus, nor with that sudden affection, serous apoplexy, much less with the water-stroke of the Germans; nor is it identical with sanguineous apoplexy, sanguineous congestion, cerebritis, meningitis, arachnitis, &c. Whether it be a primary, or secondary lesion, I shall not stop to inquire. It is often complicated.

I do not propose to enter upon the ante-mortem history of this lesion, such as erysipeloid flushings of the face, throbbing and enlargement of the temporal arteries, pain across the forehead, vertigo on rising, inability in most instances to tell a continuous or circumstantial story, disposition to slumber, ending often in coma, seldom in furious delirium; occurring mostly in fevers, sometimes in consumption, dysentery, &c., in the last stages.

In this lesion the substance of the brain appears natural, and its envelopes are in some cases but little changed; the ventricles contain more or less water; the principal part of the serosity, varying from two to eight ounces, is found in the sack formed by the arachnoid and its reflexion upon the inner surface of the dura-mater, in other words, on the outer surface of the cerebral arachnoid, constituting a stratum of water around each hemisphere, and, of course, compressing the brain in all cases.

IX.—Vascular Collapse.—Opposed to vascular turgescence or injection: the *character* of this lesion is sufficiently explained by its name; the vessels are numerous, enlarged, perhaps va-

ricose, but empty, and collapsed. This appearance is often found in the envelopes of the brain, in connexion with serosity; it may be partly owing to the manner of conducting the dissection, to cadaveric hyperæmia, and other causes, but in any case, it is of much importance, indicating previous hyperæmia, congestion, &c.

X.—Icteroid Deposite.—*Anatomical Characters:*—Cutaneous, adipose, cellular, and sub-conjunctival tissues more or less yellow—in many instances, with sub-arachnoid, and sub-peritoneal gelatinoid exudations, of a yellow color, especially along the course of the lymphatics and their ganglions, near the spine; between the posterior doubling of the mesentery, and in the anterior doublings of the mediastinum under the sternum; with yellowness of the liquor pericardii, but without serosity in the cavities, or in the cellular membrane.

The inquiries into hepatic pathology, suggested by this lesion, are too extensive for the present occasion. *Icteroid deposite* is evidently identical with, or occasioned by bile or some of its modifications. This appearance of the skin and fatty tissue can be produced at pleasure, in the healthy subject, by spreading diluted bile over the skin, and other white tissues.

The Boerhaavian notion of an *error loci*—a doctrine which supposes the circulation of the blood, lymph, and serum, to be carried on by vessels of different calibres, and that the large globules are sometimes forced into the small vessels, occasioning obstruction by an *error of place*—how erroneous soever it may be in its application to the general circulation, has nevertheless one feature (*error of place*) which seems to apply to this lesion in the biliary circulation. This can scarcely be called theory: though, on tasting the icteroid tissues, I have not been sensible of any decided bitterness, yet the color is too exact to admit of any mistake.

The yellowness of the eyes, always attributed, though erroneously, to the sclerotic coat, is confined to a dense cellular web between it and the conjunctiva. This web I accidentally noticed, as early as 1841, and, was not aware, until the

present year (1843), that Dr. Gross had first presented a description of it, in 1839, in nearly the same words which I generally used: he calls it "the *ocular fascia*—a pretty thick layer of cellular tissue," &c.

The following is offered as an example of *icteroid deposite:* A large, middle-aged man, from Louisville, on the 4th of November, 1841, (then five days sick), walked up several long stairways, throwing up black-vomit; senses regular; died fourteen hours after, having used only cooling drinks, &c.

Dissection ten minutes after death:—Skin and sub-conjunctival tissue, yellow. The weight of the body estimated beyond two hundred pounds. Adipose tissue on the chest, abdomen, and thighs, one to two inches thick—the omenta and the mesentery, about the same; the large intestine almost completely enclosed in a cylinder of fat, nearly an inch thick; the kidneys and mesenteric glands, concealed in masses of fat. The fat in the interior estimated at fifteen pounds; that of the exterior three or four times greater; the whole being firm, free from serosity, but every where of a pale, golden color.

The following is a remarkable case of icteroid deposite in all the tissues, susceptible of reflecting a yellow color, the bones excepted. It is proper for me to inform the reader, that while I regard this as a case of yellow-fever, the symptoms did not seem fully to warrant that opinion, until the last or dying stage, which, in connexion with the dissection, appeared decisive. Some very respectable medical gentlemen regarded this as a case of jaundice; others, not less competent, as a case of yellow fever. It matters but little whether the name be jaundice, ague, or parturition, if facts be given.

July 11th 1843.—L. F., born in France, aged twenty-seven, last from Havana, wood-cutter, resident three years, admitted yesterday into the Hospital, sick one week; speaks French only; medium in size; adipose tissue scanty: rests on his back: has a little pain in his forehead; quiet; senses natural; countenance free from stupidity and dejection; respiration, abdomen, pulse, tongue, and temperature of the skin natural: liver, slightly tender upon pressure; skin of an intense yel-

low, inclining to dusky hue; eyes, yellow without injection. Cups—Nit. mur. acid bath.

July 12th.—Pulse, breathing, tongue, and epigastrium, natural; yellowness undiminished. Sponging; 5 grains blue-mass; gum-water.

July 14th.—Senses natural; restless; copious hæmorrhage from the mouth and nose; throws up much black-vomit.

July 15th.—Black-vomit. Death, 10, A. M.

Dissection two hours after death:

Body moderately emaciated, warm; muscles natural; blood, dark, coagulating firmly. In an hour after the removal of the lungs, a clot formed in the pleural cavity along the spine, about a foot and a half in length, and nearly two inches thick, so tenacious and solid that it was lifted out of the chest entire, and, being suspended across the subject's leg for two hours, remained unbroken, having a dull grayish and yellowish color upon its surface. The liver, natural in size and consistence, had a slight mixture of dull gray and cork colors; gall-bladder, distended with a dark colored, rather thick bile, flowing freely through the common duct into the duodenum, by moderate pressure. Fluid and flaky black-vomit in the stomach; blood and black-vomit in the bowels. The skin, eyes, omenta, mesentery, pancreas, portions of the kidnies, urinary bladder, tendons, fasciæ, periosteum, the adipose, serous, mucous, and fibrous membranes in the head, chest, and abdomen, more or less yellow, often of a golden hue, especially in the great tendons, cartilages, and fasciæ.

XI.—Black-vomit Petechiæ.—*Anatomical Characters:*—Small dottings in the mucous tissue of the duodenum, stomach, and small intestines, sometimes like grains of powder, or Indian ink, with which sailors and others mark their bodies with names, pictures, &c., but more generally, like fine, black sand, or charcoal powder; always black; not removable by washing, though not deeply imbedded in the tissue, which is generally of a natural consistence.

I take the following case, at random, from the dissection of a stout man from Louisville: The mucous coat of the duode-

num thin, rough or mammillated, and infiltrated with a fine dust or a powder-like substance, black as charcoal, not removable by washing or gentle friction, but imbedded in the tissue. These small specks, resembling those sometimes seen on the surface of apples, were distinct, but very numerous, giving the membrane a black or gray appearance, according to their concentrated or isolated location. No change of texture in the other duodenal coats.

Is not this the black-vomit matter *in transitu?*

XII.—Œsophageal Apthæ.—*Anatomical Characters:*—Irregular, generally longitudinal patches, and stripes in the epidermic lining of the gullet, without marked change in the mucous tissue, which latter suffers more or less denudation; the white portions of the epithelium, brittle, easily detached. The state of the mouth, stomach, intestines, and gullet itself, do not appear to offer any uniform accompanying appearances illustrative or explanatory of this lesion, which much resembles, at least in color, the mildest forms of thrush or apthæ in children, and is, probably, of no great importance in morbid anatomy.

XIII.—Solar Hyperæmia of the Lungs.—The history and morbid anatomy of this lesion are given in two papers which appeared in the New York Medical Gazette, in the year 1841, one of which was copied into this Journal. (Vid. vol. iv, p. 384, November, 1841—*Observ. on Solar Asphyxia or Coup de Soleil.*) The subject is now alluded to chiefly for the purpose of suggesting a name for the lesion which is there fully described, as well as its ante-mortem history.

This lesion, nearly perfect, has been found in a few instances after rapid deaths from yellow-fever: a man from Louisville, died of yellow-fever; I was informed that he had, in the *last* stage, symptoms resembling *asphyxia*. Dissection ten minutes after death: the entire mucous membrane of the air-passages of a dull red color, loaded with blood; lungs completely distended, filling the chest and crepitant only upon their exterior portions; extensive central infiltration with solidified, jelly-like blood; the pulmonary tissue on being cut in slices

presented smooth surfaces, impermeable to air; the bronchial tubes contained bloody froth. This dead subject has been referred to more than once, in this paper, for illustrations.

I hope I may be permitted to add, not as lesions, but as the names of facts not unworthy of the dissector's attention, the following:

XIV.—Post-mortem Muscular Contractility.

XV.—Post-mortem Capillary Circulation.—In the April number of this Journal, (Art. *Post-mortem Researches*,) these facts are shown to have an application to the physiology and pathology of death. Let it not be supposed that these terms are absurd. They relate to that middle state between apparent and absolute death—that *terra incognita*, where vitality, though extinguished in some tissues, smoulders in others, or quickly disappearing from all, is succeeded by the reign of decomposition, obscuring the foot-steps of disease, like a volcano whose eruptions having subsided, leave the air darkened with cinders and ashes, which, continuing to fall, not only obliterate the traveller's pathway, but conceal the rents or lesions which have, on all sides, scarred and disfigured the face of nature.

Death—The Agony.—The transition through the territory of death—the change from vital to inert matter, presents a sort of interregnum in physiology, and in pathological anatomy, of which imagination has taken advantage, by exaggerating the pains and horrors to which it is incident. Even the language of science is tinged with unwonted severity. The last stage, when, if the patient's understanding be unimpaired, he seldom complains except of inability to sleep, loss of appetite, want of exercise, slight smothering, &c.—the last stage, when often, a deep sleep, with total insensibility and unconsciousness, exclude the possibility of acute suffering, is called the agony—a phrase by far less applicable to death from acute fever, especially and beyond all others yellow-fever, than to deaths from consumption, dysentery, and some other maladies. In the agony, I have known men to talk about small uncollected debts, and matters of far

less importance, or of total indifference, expressing no painful sensations when asked in relation to the subject. I have seen them watch the mosquito to brush it off, and wipe with care black-vomit from their bed-clothes. Particularly have I been struck with the ingenuity with which the mothers of families have interrogated me in the LAST AGONY as to the chances of their recovery, when in fact they felt nothing scarcely of death's advances at the time.

In the last agony the poet Keats said, "I feel the flowers growing over me." The last words spoken by the astronomer Laplace, were: "*Ce que nous connaissons est peu de chose; ce que nous ignorons est immense.*" In the last agony, Dr. Wm. Hunter said to his friend Combe: "If I had strength enough to hold a pen, I would write how easy and pleasant a thing it is to die." Dr. Geo. Fordyce, in the last agony, "desired his youngest daughter to read to him. She read for about twenty minutes, when the doctor said, 'stop, go out of the room, I am going to die'—the attendant went immediately into the bed-room and found him dead."

The following case which I clip from my MSS. outlines of the symptoms of yellow-fever, as illustrated by special histories taken at the bedside, will show that, from first to last, there is not in some cases of this malady any acute agony at all:

Bonar, born in Ireland, aged about thirty, a pedlar in Girod street, of strong constitution, resident in New Orleans seven months, requested my services, at four o'clock, on the evening of August 13th, 1839. He had walked about during the day without being aware of any fever, until the afternoon: understanding natural; *has no pain;* said he could "drink the ocean dry," and felt a smothering at his heart; pulse air-like, without being rapid; skin cool, dusky, yellowish, and moist; eyes red, prominent, with considerable yellowness; tongue reddish, dry, rough; nausea; breathing easy; bowels costive; has taken no medicine. Ordered blue-mass, calomel, sinapisms, bath, &c.; medicine operated mildly in the night; he slept a little twice. He had hiccup; a sensation of

suffiocation; wished to go out into the open air. At 7 o'clock next morning, he sent a police officer to know if he might take a glass of wine or spirits. In five minutes after (before I had time to go two squares) he died; having lived about fourteen hours, from the time at which he first felt any serious symptoms. His wife, fair, ruddy, robust, and young, died with black-vomit, accompanied with abortion, five days before him, leaving a family of young children among strangers. I did not see her until the last stage. Her understanding was clear. Two hours before death, in the most forcible and artful manner, she endeavored to draw from me a direct opinion of the result of her case. She suffered but *little—no pain* except from pressure on the abdomen.

Conclusion.—In drawing up this brief account of the above lesions, I have often trusted to memory, though I could have copied a great many histories made when the subject was actually before me, a proceeding too extended for Journalism.

Since these observations, such as they are, did not originate in the closet, nor yet in a mere compilation of what others had done, I shall deserve the less censure, if in some instances memory has led me into any exaggerations—they are wholly inadvertent. It is possible that some terms used in these descriptions, though exact and just in their application to particular cases, may not apply equally to the average character of the lesion. All I can say is, that I have seen, or I believe I have seen in the dead body, what I have here related.

Written, as this paper is, in the hurry incidental to professional business, I have paid but little attention to its literary character. Without wishing to overrate or even to appreciate, at this moment, the importance which these lesions may possibly possess, without attempting to redeem their barrenness by pathological discussion, I consign them to the attention of the student of morbid anatomy. I regret that I have not leisure, perhaps not a sufficient number of observations, to ascertain by calculation their relative frequency.

Having no theoretical Eureka to uphold, like Adam Warner, in the Last of the Barons, I have not even attempted systematic arrangement in this paper. The Eclectic school, so catholic in its aims, choosing from all systems whatever is the best established as general principles, is the true medical church, which Hufeland has described: "there has ever been an invisible church of true physicians who have continued faithful to nature, have acted under her direction, who have all thought and meant the same thing, who will be understood throughout all ages and in spite of the confusion of tongues." To eclecticism, not to exclusivism, must we look for our morbid anatomy. "It would be absurd to ask the dove to write the natural history of the eagle; it *must* be one sided." (*Mrs. Austin*). The pendulum of theory now vibrates between solidism and humoralism. It may be said there is at this moment an undue bias towards the latter, though there is little or nothing new in the way of observation and experiment, to justify such predilection. As yet the facts offered are too much like the charge of a celebrated judge to the jury:

> "Chief Justice Parker,
> He made that darker,
> Which was dark enough before."

Those who are now fully satisfied with former theories must be so upon the principle by which Ottilie explains resignation—"Resignation, my dear, is only despair."

Genius will ever theorise, and so it should, with proper restrictions and limitations. "All genius is metaphysical: because the ultimate end and aim of genius is ideal, however it may be actualized by incidental and accidental circumstances." (*Coleridge*). Even the rejection of all theory, is in itself a theory. Eclecticism consists of a series of theories or rather of general principles, more or less established. Exclusivism is what the Indians call a medicine-man; by its influence, rather than by its truth, it tyrannises over the minds of the multitude.

Pathological anatomy, alike useful in overthrowing false theories, and in laying the foundation of true principles, is now advancing with an unparalleled rapidity. "The force of intellect all-powerful in the review of the past, is seldom felt in judging of the present." (*Alison's Hist.*) Yet, here, the past is almost nothing—the present almost every thing. If we except a few illustrious names, recently numbered with the dead, what can the past offer in morbid anatomy, worthy of comparison with the works of Louis, Andral, Cruveilhier, not to mention other names now living, and destined to live longer than the pyramids of the Pharaohs.

In pathological anatomy, the range of legitimate theory is, as it ought to be, a limited one. It marshals facts into their proper places, agreeably to their family resemblances, analytically and synthetically. Its deductions are only applications of general facts. Its inductions, ascending from facts to facts according to their order of succession, discover more and more the uniformity and the universality of the facts themselves, without vainly seeking to show, what has never been explained, the absolute or essential connexions between cause and effect. Let those anatomists who explain every thing by the knife—let those pathologists who trace the causes of disease through their chemical processes, reflect upon the following explanation of cause and effect, by Dugald Stewart:

"It seems now to be pretty generally agreed among philosophers, that there is no instance in which we are able to perceive a necessary connexion between two successive events, or to comprehend in what manner the one proceeds from the other, as its cause. From experience, indeed, we learn, that there are many events, which are constantly conjoined, so that the one invariably follows the other; but it is possible, for any thing we know to the contrary, that this connection, though a constant one, as far as our observation has reached, may not be a necessary connexion; nay, it is possible that there may be no necessary connections among any of the

phenomena we see: and, if there are any such connections existing, we may rest assured that we shall never be able to discover them." (*Elem. Philos. Mind.*)

How grating to the ears of the men who have been accustomed to hear the above language from the lips of the late Professor Stewart, of the University of Edinburgh, must be the following language of Professor Liebig, who is expected to succeed to a chair in the same University, during the present year. After asserting that, "quinine, the alkaloids of opium, morphia, &c., combine chemically, by means of their elements forming new, or transforming existing brain and nervous matter—become converted into their constituents"—(how much better to give the genuine article, *brain itself!*) Professor L. holds the following language: "Their action on the healthy, as well as diseased organism, admits of a surprisingly simple explanation. It argues only a want of sense to consider the action of these substances inexplicable." (*Animal Chemistry, appli. to Phys. and Path.*)

A fact, in popular language may be said to be explained, when it is referred to what appears as its immediate cause, though this, in truth, is only saying that one thing succeeds another, and is, strictly, no explanation at all. Pathological explanation, in a strict sense, is too deep to be fathomed with the longest sounding line of sciolism, or of *animal chemistry itself.*

Destiny, was to Jupiter, gods and men, what theory is to physicians; it directs the pen from the beginning to the end of every prescription. When the star of Broussais was at its culmination, in 1833, France, once a large exporter of leeches to the number of millions, exhausted England, Germany, Hungary, Moldavia and Wallachia, importing in a single year, 41,654,300! (Vid. *Dr. Muehry's State of Med*). A thousand scalpels gleamed almost at once in the realms of the dead—"La France," said Cruveilhier, "est désormais la terre classique de l'anatomie pathologique." (*Anat. Path.* p. 5). Nor was this a vain boast, undeserved by the *grande nation.* Morbid anatomy soon clipped the wings of Broussais, dimin-

ished *gastrites*, and lessened the importation of leeches; and, long before this great man died, his doctrine, his popularity, and his authority waned.

Every theory must look into morbid or rather pathological anatomy, to a greater or less extent, for a solid basis, for something like a panacea for the uncertainty of medicine: otherwise, it must continue to be a fruitful source of satire.

New Orleans, July, 1843.

ART. II.—*A New Method of removing Foreign Bodies from the Joints.* By G. GOYRAND, M.D., Chief Surgeon to the Hospital at Aix; Corresponding member of the Royal Academy of Medecine, &c. Translated from the French for the Western Journal of Medicine and Surgery, by E. L. GRANT, M.D., of Louisville.

The generalization of the method of subcutaneous incision is a great improvement in surgery. Every day new applications of this method may be made; it renders exempt from all danger operations which, performed by opening the joint, are very severe and often fatal.

Foreign bodies in the articulations render motion painful, and constitute a serious infirmity, particularly when situated in the knee. Should they be extracted? We know the danger of penetrating wounds of the articulations; and if we consult authors on the results of the extraction of these substances, how often shall we find that this operation has been followed by the most fearful consequences! Richerand performed it twelve times; four of the patients died, and of those who recovered, one, a young girl, was cured with great difficulty. Dupuytren moved a foreign body from the tibio-tarsal articulation: the wound being somewhat irritated in consequence of the concretion not being steadied by the fingers of the operator, fatal arthritis supervened.* In November, 1835,

*Bégin, Leçons orales au Val-de-Grâce. Octobre 5, 1840.

Lisfranc, extracted a foreign body from the knee of a healthy, robust, young man: the patient died. In 1839, the same surgeon again performed the operation, and with a similar result.*

In May, 1839, a man 35 years of age, was admitted at the Hôtel-Dieu of Nantes, who had in his right knee a very moveable concretion. This substance was extracted without difficulty, the patient survived the operation but a few days.†

Roux performed a similar operation on the right knee of a young man, who had been received into the Hôtel-Dieu, for orchitis; a violent arthritis supervened, followed by excessive suppuration, which rendered it necessary to amputate at the thigh; the patient died soon after. Finally, this operation, performed October 5th, 1840, by Bégin, at Val-de-Grâce, was likewise followed by death.‡

We have here cited a number of cases in which the removal of foreign bodies from the articulations caused death. We are generally more willing to publish our success than our failures; nevertheless, we should in vain seek in the periodical collections of late years an equal number of cases in which this operation resulted favorably. When, after the operation, the synovial membrane becomes inflamed, should the patient be so fortunate as to escape death, which unhappily is very seldom the case, he is ever after troubled with anchylosis, as has been proved by the observations of Richerand, Kirby, and Boyer.

With the knowledge of these dangers, surgeons have hesitated to perform this operation, and have sought to render it unnecessary by so placing the substance that it may cause less inconvenience. With this view, some, among whom are Gooch, Middleton, Hays, and Boyer, have suggested the method of pushing it into a cul-de-sac of the synovial membrane, at a distance from the centre of the joint, and keeping

* Gazette des Hôpitaux, 31 Août, 1839, et 27 Octobre, 1840.

† Journal de la Section de Médicine de la Société Académique de la Loire-Inférieure, 67e Livraison.

‡ Gazette des Hôpitaux, 27 Octobre, 1840.

it in this position by means of a tight bandage, a laced stocking, or a knee cap, in the hope that it will fix itself there by contracting adhesions. Others have thought it best to produce anchylosis by protracted immobility of the limb. B. Bell considers the extraction of these bodies so dangerous, that in cases in which they are adherent, and where consequently their removal would present difficulties, requiring much search and handling of the part, he recommends amputation of the limb.*

But recent improvements in surgery have opened to us new means. The harmlessness, so well demonstrated by Julius Guérin, of subcutaneous wounds even when they penetrate the joints, has suggested to me the idea of a new operation, which will remove this infirmity without involving the least danger. This operation is particularly described in the following cases.

Case 1.—J. B. A., aged 24 years, came to the Hospital of Aix, September 14th. He had in his right knee a foreign body which was very annoying, frequently causing acute pain. This concretion, about the size of an almond, was free in the synovial membrane. On the first examination of the patient, the substance was on the outer side of the articulation. We pushed it above the patella, then to the internal side of this bone, and afterwards under the ligament of the patella, where it was lost. When thus hidden between the articular surfaces, it occasioned pain and swelling of the knee; and would generally reappear when the patient walked on an uneven surface.

On the 15th the concretion was found situated as on the first examination; the knee was slightly swollen and painful. Repose and cataplasms were ordered, and on the following day the swelling and pain had subsided. The patient was very desirous to be freed of his infirmity. Formerly I should not have consented to operate; because I do not think a surgeon ought to perform a dangerous operation, to cure a sim-

* Cours complet de Chirurgie, traduit par Bosquillon t. v. p. 282.

ple infirmity; but the idea struck me that I might in this case, make a new application of the method of subcutaneous incision. I thought to extract the foreign body at two operations. In the first, I would divide the synovial membrane over the foreign body, together with the muscular and fibrous tissues which cover it, and push the substance across the opening into the subcutaneous cellular tissue. In the second, performed ten or twelve days after, when the subcutaneous wound should have become perfectly cicatrized, I would extract the body by a simple incision. This idea pleased me; but I wished to reflect upon it for a few days.

The inquiry arose in my mind, would not these concretions, allowed to remain in the organised tissues, immediately produce suppurative inflammation, which might communicate itself to the articulation? I thought not; these bodies are neither very large, heavy, nor rough; being analagous in their texture to the living tissues; and are so situated that the air cannot penetrate to them. It seemed to me that these circumstances should prevent suppurative inflammation. At what point should the incision be made? The concretion might be moved into any of the situations of the articular cavity. At the sides of the knee, at the articular interline, or very near it, it is covered but by the skin, a fibrous layer, and the synovial membrane; but then I should not be able to fix it steadily. I decided therefore to push it to the upper part of the synovial membrane, into the cul-de-sac formed at this point by the reflexion over the articular surfaces. But then the question recurs, at what particular point of the cul-de-sac? There it would be necessary to make the incision through the anterior straight muscle of the thigh, its edges not being sufficiently separable to allow of the extraction of the concretion. On the inside of this muscle, the cul-de-sac of the synovial membrane is much nearer the articular interline than on the outer side. It would be better to make the incision through the vastus externus. At this point the concretion could be easily fixed by the fingers: the longitudinal incision would divide the vastus externus muscle obliquely.

which would separate so as to allow of the passage of the foreign body. The bistoury I used was stout, narrow, sharp pointed, and fixed on a spring handle. I operated December 22d, in the following manner:

The patient being placed on a bed, I stood at his left-side. I pushed the foreign substance into the outer part of the superior cul-de-sac of the synovial membrane, a short distance above the patella, where I fixed it, continuing to press it from below upward, with the left thumb and index finger. An assistant then raised the skin of the thigh, above the concretion, in a large transverse fold; in this way I brought towards this body a portion of skin originally distant from it. I plunged my bistoury from above downwards, through the base of this fold, and directing the point towards the foreign substance, I cut under the skin, parallel with the axis of the limb, all the tissues that covered the body, which latter I found to be of the consistence of bone: I was obliged to make three cuts before I could divide the tissue, when I felt the extraneous body slip from under my fingers, and found that it had passed out of the articulation. I then withdrew my bistoury, and the assistant let go the fold of the skin. Some drops of blood mixed with bubbles of air escaped through the puncture of the skin, which was situated a short distance above the point where I had cut the synovial membrane. A few bubbles of air remained in the cellular tissue below the opening.

The foreign body had not passed under the skin, as I had wished, but glided between the middle and outer part of the triceps muscle. I left it a short distance above the incision of the synovial membrane.

I covered the wound, which was very small, with adhesive plaster. A thick compress was held by a circular band upon the point where the triceps muscle, aponeurosis, and the synovial membrane had been divided; with the double object of compressing the subcutaneous wound and preventing the retrocession of the concretion, which was above. Contrary to the directions that had been given, the patient left his bed three times on the day of the operation, notwithstanding which no serious consequences followed. The wound in the

skin healed up in twenty-four hours. The plastic lymph, which filled the opening made by the bistoury, formed then a small tumour which, however, was by no means painful; there ensued in the joint neither pain nor stiffness.

I removed the compress and bandage six days after the operation, when I found in the articulation another foreign body the size of a pea, moveable like the first. Two days after, a third presented itself, very nearly the size of the one I had dislodged. This one concealed itself between the articular surfaces, and did not re-appear until the 8th of October; the patient fixed them both on the outside of the articulation, until I arrived. Whilst I examined the two concretions, the smaller one escaped from beneath my fingers and concealed itself under the patella. The larger one was hard, and from the sensation it imparted on friction against the osseous surfaces, I supposed it to be rough. I should have preferred dislodging both the substances by the same incision; but, fearing that the larger one should again become concealed, I decided on removing it immediately, and leaving the other, it being two small to occasion much inconvenience.

The synovial membrane irritated by the foreign body which had remained several days between the osseous surfaces, contained a large quantity of effused synovia. It would, perhaps, have been better to defer the operation, as on the former occasion, until after all irritation should have subsided; but the subcutaneous incision seemed to me so harmless that I did not fear to make it notwithstanding this circumstance. I was aware that on the division of the synovial membrane the fluid would escape, and pass into the cellular tissue, but would not be discoverable the day after the operation.

On the 8th of October, I fixed the foreign body in the upper cul-de-sac of the synovial membrane, a little nearer the median line than the first, but still outside of the straight muscle. The skin was raised as in the first operation, with a single stroke of the bistoury I divided the aponeurosis, triceps muscle, and the synovial membrane from below, upwards. In withdrawing the instrument, I was careful to di-

vide sufficiently the aponeurosis and triceps muscle under the skin. As soon as the deep tissues were divided, the body slipped under my fingers and passed along the blade of the bistoury into the sub-aponeurotic cellular tissue. The subcutaneous cellular adipose stratum being very thin in this patient, the displaced concretion was very near the surface. I pushed it up a short distance above the opening in the synovial membrane, and left it there, on the external side of the wound in the skin. The wound was dressed as in the first operation, and the patient required to keep his bed. The results of this operation were as simple and as happy as those of the first. The day after, the opening in the skin was healed, the effusion of the synovia had entirely disappeared, and the next day A. walked about the Hospital without experiencing the slightest pain. The small concretion which remained in the knee caused no inconvenience.

After the lapse of eleven days, the foreign substances that I had removed from the articulation into the cellular tissue had caused neither constraint nor pain. Were I to leave them there they would become encysted; the first of these bodies had been one month in the place where I had left it; its cyst must be already formed. The patient might now be considered cured; but I wished to finish the operation as I had at first intended. October 19th.—I proceeded to extract the foreign body, which I had last dislodged. Holding it fixed with the left hand, I exposed it by a small incision, including the skin and aponeurosis—then seizing it with a pair of dissecting forceps, removed it. This body was solid and appeared already encysted; so that this second operation was evidently useless. I did not wish to extract the concretion that was under the vastus externus muscle, as this would unnecessarily complicate the operation. The foreign body which I had removed was of an irregular form, twenty-two millimetres in length, eighteen in width, and eleven millimetres at its greatest thickness. One of its sides smooth, regular, and very slightly convex, was cartilaginous; the other, irregular and knotted, was osseous. On sawing this sub-

stance it had the appearance, hardness, and density of ivory, and was covered on the smooth side with a regular cartilaginous layer nearly two millimetres in thickness, having the appearance of a diarthrodial cartilage. This body was situated in the cellular tissue, its cartilaginous surface towards the aponeurosis and the small extremity upwards. The edges of the incision were exactly approximated, and the patient again ordered to remain in bed. Notwithstanding these precautions the wound suppurated, and on the 3d November, it became necessary to re-open the wound to give issue to the pus collected under the aponeurosis. November 14th.—The wound was not yet entirely healed, and there was a dull pain in cicatrix, which, however, did not extend to the joint.

The removal of foreign bodies from under the skin, after they are dislodged, is not in any case a dangerous operation; but, in my opinion, an entirely useless one. Henceforth I shall allow them to remain in the cellular tissue.

Nearly all foreign bodies in the articulations may be extracted by my method. If instead of a hard body, we encounter a cartilaginous one, it will be divided by the bistoury, but the fragments may be as easily dislodged as entire concretions.

These substances are sometimes found attached to the wall of the synovial membrane, by a membraneous pedicle, which may be easily divided. The operation will then consist, first, in cutting the body from its attachment, and then, after the lapse of several days, dislodging it.

Should several foreign bodies be found in the joint at the same time, the incision should not be made until we have brought them all to one point, so as to allow them to pass through the same opening. I should have observed this precaution in A's case, had I suspected the existence of two concretions. Perhaps I ought to have deferred my second operation until the small body which remained in the knee could be dislodged with the large one; but I feared this latter might again disappear between the osseous surfaces; and besides, the other was so small that it could not materially incom-

mode the patient. Should it increase, I will remove it as I did the other two.

I have several times extracted foreign substances from the articulation, on dead subjects. On one occasion, I removed the scaphoid bone of the carpus, after having introduced it into the articular cavity of the knee, by a small opening made at the side of the patella. In none of these experiments did the foreign body pass between the middle and the outer fascia of the triceps muscle, as in A's case; but it invariably lodged itself in the sub-aponeurotic cellular tissue, never under the skin. The subcutaneous cellular adipose tissue is too dense to allow this body to penetrate it. It is of little consequence to the success of this operation whether the dislodged body passes between the fascia of the triceps muscle, or in the sub-aponeurotic cellular tissue; as in either case it becomes encysted. In A's case, in which the dislodged body produced suppurative inflammation, it would have been better had the concretion been near the surface. We should endeavor to leave the foreign body under the aponeurosis; and we shall always be able to do so, if the vastus externus muscle be sufficiently incised.

I place entire confidence in the operation I have just described; it is simple and innocent, and is destined to displace one more dangerous than that for strangulated hernia.

ART. III.—*Cases of Influenza, with Remarks.* By SOLON BORLAND, M.D., of Louisville.

Leaving to those who prefer, and are better qualified to perform it, the ambitious and "delightful task" of discussing the *philosophy* of epidemics in general; I propose to myself the more humble, if not more useful, duty of recording upon the pages of "The Western Journal," a few cases of the INFLUENZA, which has recently prevailed, not only in this city,

but over a large portion of our country—ranging, generally, from the far north-east, to our south-western borders, and probably beyond them.

In doing this, I have no high expectation of adding any thing material to the stock of common-place knowledge, already so abundantly furnished, as well to the unprofessional observer as to the physician, by its almost universal prevalence, and its indiscriminate attack upon "all ages, sexes, and conditions" of the people; nor, yet, of presenting any views of theory or practice, remarkable for originality or value; but merely as a brief but faithful chronicle of the medical times, in relation to this particular epidemic, so far as it has passed under my own observation. I write from notes accurately made at the time—of observations carefully conducted.

Case I.—Mrs. W———, aged about 30 years, of small size and medium development, nervo-bilious temperament; the mother of several children—the youngest of which is now about eight months old. With previous children, has always menstruated regularly during lactation, as, also, with the last, until a little more than two months since, when the discharge failed at the regular period—with lumbar and hypogastric pains; and has thus remained; but her indisposition, on that score, was not such as to induce her to call in medical aid.

Sunday, July 16th.—I was called to see her this morning. On Friday night last, she felt the usual initiatory symptoms of the prevailing influenza: head-ache, sneezing, slight cough, and general muscular soreness. These symptoms have increased in severity up to this time. This is, also, her regular menstrual period. She now has very severe head-ache, her eyes are red and intolerant of light, skin dry and hot, face flushed, she has much hypogastric and lumbar pain, slight sore-throat, troublesome dry cough, sense of fatigue, great muscular soreness generally, and particularly about the chest; tongue thinly coated white, but full, moist, and otherwise natural; pulse 112, full and hard; bowels constipated.

I immediately bled her at the arm, to the amount of ℔biss;

upon which there speedily followed slight nausea, considerable reduction of the force and frequency of the pulse, general perspiration, and abatement of pains and soreness. I then ordered ℞ pil. hydrag. gr. x.—pulv. ip. comp. gr. xij. ft. pil. no. iv. s. one pill to be given every two hours.

Evening of the same day.—She feels much better in all respects. I now prescribed, ℞ pulv. rhei gr. x., ext. colocynth. comp. gr. xx—ol. anis. gtt. iij.—ft. pil. no. vj. s. two of these pills to be given every hour.

Monday morning, July 17th.—There is no noticeable change in her condition since last evening. She has taken only one dose of the pills, and has had no motion of her bowels. I directed the remainder of the pills to be taken. *The blood drawn yesterday morning is deeply cupped, and covered with a very thick and tenacious buffy coat.*

Tuesday morning, 18th.—I do not visit her this morning; but her husband has called, and informs me that her bowels have been freely and easily moved—that her catamenia came on during the night, and that she is quite comfortable, with the exception of a slight cough, and some remains of muscular soreness about the chest when she coughs. I prescribed, ℞ vin. cohclici f℥ss., tinct. lobel. inflat. f℥ij., syr. rhei simp. f℥iss., M. S. a teaspoonful to be given at intervals of two or three hours.

Her convalescence progressed satisfactorily.

Case II.—J. L———, a sailor, aged 26 years, of medium height, and spare habit, of a temperament not strongly marked, but inclining, I think, to the lymphatic. He has usually had very good health. His last voyage, made about eighteen months ago, from Norfolk to New Orleans, was a very tempestuous one, and, in consequence of severe exposure, he had a slight attack of articular rheumatism of the lower extremities; of which, however, he was soon relieved. About the first of this month, after bathing in the river, he had a slight attack of catarrh, of short continuance.

About a week ago, he felt the initiatory symptoms of influenza: head-ache, cough, general *malaise*, muscular soreness,

&c. These symptoms continued and increased in severity, for several days, when he was suddenly seized with a very acute pungent pain in the ball of the right foot, near the root of the great toe, attended with tenderness to the touch, and swelling of the part. This affection soon involved the whole foot, and, in regular and rapid succession, the ankle-joint, leg, knee, thigh, and hip, of that side; rendering the whole limb powerless, with constant acute pain, great heat, swelling, and exquisite tenderness—and, scattered here and there, over the more painful points, there appeared circumscribed red spots on the skin, about half an inch in diameter. Next day, the other lower extremity, and, in daily succession, each of the upper extremities, became affected in the same way—involving the shoulder-joints, and all the muscles of the chest; rendering the patient intirely helpless by his own efforts, and agonized by any attempt of others to move him; and his respiration painful and embarrassed.

Wednesday afternoon, July 19th.—I was called to see him this afternoon, and received the foregoing account: His condition is, generally, as above described. Besides, his skin is very hot, but moist; his tongue is red at the edges, and coated with tenacious mucus; there is no tenderness nor tension of abdomen, but he has had no motion of his bowels for several days; he has no appetite, but much thirst; and his urine is scant and high colored. His *pulse is feeble, small, exceedingly rapid, and intermittent.* (His intellect unimpaired). I prescribed an active cathartic, to be followed, after it had operated freely, by this mixture: ℞ vin. colchici f℥j., tinct. opi. f℥ss., ant. et potas. tart. gr. xij., syr. rhei simp. f℥iiss. misce et solve. S. a teaspoonful to be given him *every two hours.*

Thursday morning, July 20th.—The cathartic had operated well. The first dose of the mixture had vomited him, the second had produced some nausea, but was retained, and the succeeding doses had been borne well. His skin was not quite so hot, but still moist; his tongue not so red, and was fuller and moister, but darker, and more heavily coated. Thirst somewhat abated, but no return of appetite; pulse

more voluminous, distinct, and regular, but not to be counted yet; there is no noticeable reduction of pain, swelling, &c. I directed the same mixture to be continued, in the same doses, but *every hour.*

Evening of the same day.—General condition not materially changed since morning, except, perhaps, the pains are rather more lancinating. The *pulse*, however, has undergone a very remarkable alteration: it can now be distinctly counted, *is* 112, *full, hard, and bounding; but quick, and not quite regular.* I now bled him at the arm, to the amount of ℔ij., when nausea, general and profuse perspiration, and softening of the pulse, with *regularity*, came on. The blood, when drawn, seemed unusually fluid, and was of a turbid, dirty, brown color. I directed the same mixture to be continued, as in the morning.

Friday, noon, July 21*st.*—He slept well last night, for the first time in more than a week; and is decidedly better, in all respects. His respiration is, comparatively, unembarrassed, and unattended with pain, and he can move his limbs a little; those first in the order of attack most freely. He passed urine copiously this morning, for the first time since his attack; and had a spontaneous motion of his bowels, of large quantity, and almost natural character. He has no undue thirst, and some desire for food; his tongue is without redness, full, and moist, and with a thick drab coating. The blood, drawn yesterday evening, presents a remarkable appearance: serum slightly in excess, and of a greenish color; coagulum exactly spherical, with a cup-like excavation at top, regularly formed, about three inches in diameter, and one inch and a half deep, lined with a buffy coat about half an inch thick, nearly, white, and nearly as firm and elastic as caoutchouc. I separated it from the clot, and preserved it in spirits, as a specimen.

I directed the same treatment to be continued.

Evening of the same day.—His general improvement has continued; but he has passed no urine since morning. I directed him to suspend the use of the mixture for the present, and take at one dose, the following powder: ℞ hydrarg. protochlorid. gr. x., potas. nitrat. gr. viij., pulv. rhei ʒj.

Saturday morning, July 22d.—The powder taken last night, has procured two good motions of the bowels, and abundant discharge of urine this morning. But he was restless and uncomfortable through the night, and does not feel so well as he did last evening. He has some increase of pain generally, and in the head, some cough, and a dry skin—pulse 100, quick, and hard. I bled him at the arm again, to the amount of ℔ij., when the pulse yielded, and the skin became moist. I now directed the mixture to be resumed, as before.

Night of the same day, 9 o'clock.—He is much improved in all respects, and is quite comfortable. The blood drawn this morning presents about the same appearance as that first drawn. I directed the same mixture to be continued, as before.

Sunday, noon, July 23d.—His improvement has progressed satisfactorily. I directed the same mixture to be continued; and, in addition, as an external application to the joints, twice a day, with gentle friction, the following liniment: ℞ Sem. dat. stramon. et sem. colchici contus. aa ℥ij., ol. terebinth. fervent. f℥viij; infuse for three hours.

His convalescence, from this time, was rapid and satisfactory.

Case III.—Mrs. B———, aged 52 years, has for many years been in very delicate health, and subject to frequent attacks of severe illness, as pneumonia, dysentery, &c. She was attacked, about two weeks ago, with the usual initiatory symptoms of the prevailing influenza, as described in cases one and two. Received medical attention for about a week, without relief; then called in another physician, who has given her some attention, and now calls me in to see her. Dr. M. had bled her at the arm twice, once in small quantity, and once to the amount of ℥xij., and had her cupped over the upper front of the chest, with partial, but temporary relief. He had, also, purged her moderately with blue-mass. For several days past she has had excessive pain in the chest, particularly at the præcordia; and, three or four times a day, spasms of all the muscles of the chest, (and seeming to in-

volve the *heart*) so as to suspend, almost intirely, for the time, from five to fifteen minutes, both respiration and circulation.

Friday morning, *July* 21*st.*—Found her in a spasm—*pulse very feeble, irregular, and intermittent*—respiration convulsive, and almost impracticable; almost unconscious of every thing, except a severe fixed pain at the præcordia. I made immediate application of Granville's strongest lotion, to the spine between the shoulders, with speedy partial relief; and as the spasm relaxed, I applied it over the seat of pain. In about ten minutes, the spasm passed off; but the pain persisted; and *the pulse rose full and powerful, but somewhat irregular, beating* 84 *in the minute.* I now bled her at the arm, to the amount of ℥xij; upon which the pulse became soft, slow, and more regular; and all her distressing symptoms were much relieved. As her bowels were constipated, I prescribed a pill, of the usual size, composed of equal portions of pil. hydrarg., pulv. rhei, and ext. colocynth. comp.; to be taken every hour, until free motion of the bowels should be procured.

Evening of the same day.—She has taken eight of the pills, without having any motion of the bowels; and has had three spasms during the day. I directed an *enema* of warm sweetened gruel.

Saturday morning, 22*d.*—The enema last evening, produced several very free, but painful motions of the bowels. After which, she felt much better, and passed the night in tolerable comfort; although she had several slight spasms during the night, and one this morning. Her pulse is quite active and strong, except during the spasms; and the pain at the præcordia continues. I now prescribed: ℞ Vin. colchici. f℥j., tinct. lobel. inflat. f℥ss., tinct. opi. camph. f℥iiss., ant. et potas. tart. gr. viij., misce et solve. S. give a teaspoonful of this mixture every hour.

Evening of the same day.—She has had no spasm, and but little pain, since this morning. The mixture has nauseated her greatly, and vomited her twice. Improvement in all

other respects very decided; her pulse is greatly reduced in force, soft, compressible, and regular. I directed the mixture to be continued, but in smaller doses, and at longer intervals; also, use a warm pediluvium, and drink a tumbler of warm lemonade, containing sp. eth. nitros. f℥j., at bed time.

I should have stated before, that, throughout the attack, her urine has been scant and high colored, and voided with pain. She, also, has suffered for several years past, with internal hæmorrhoids, and during her present illness, they have been the cause of the pain attending the motion of her bowels.

Sunday morning, 23*d*.—After using the pediluvium, and drinking the lemonade, last night, she perspired freely, and passed urine more freely and easily than since the commencement of the attack. She has had no recurrence of spasm: and her pulse and skin feel natural. The mixture, which seems to have acted favorably in other respects, produces, now, constant and distressing nausea; although the dose has been greatly reduced, and the intervals of its administration greatly lengthened. In order to avoid this distressing nausea, if practicable, without discontinuing, yet, the antimonial and anodyne, I substituted for the mixture, this prescription: ℞ pil. hydrarg. gr. xij., ext. hyoscyam. gr. xxiv., ant. et potas. tart. gr. ij., ft. m. et in pil. div. no. xij. S. give one of the pills every two hours.

Afternoon.—She has taken two of the pills; but has been so much nauseated by them, that I am sent for. I find other symptoms as this morning. Directed half a pill to be taken at a dose.

Night.—Pills still nauseate, so that I abandon their use, and direct an enema at bed-time.

Monday morning, 24*th*.—Her bowels were gently, but efficiently moved, by the enema last night. She seems this morning to be so far relieved, as to require no further regular attendance.

From this time her convalescence was slow, but continuous.

Remarks.—The minuteness with which I have detailed the history, symptoms, and treatment, of the foregoing cases, leaves but little necessity for remarks to indicate the views of pathology and therapeutics, by which I was governed in their management, or to enable my readers to adopt views of their own. I make the general remark, however, that, in all the cases of the influenza seen by me, and particularly in the foregoing ones, the *inflammatory diathesis* was clearly and strongly marked; and that blood-letting was as clearly and as strongly indicated, as the prime and efficient remedial agent. True, there occurred a number of cases, as it will be found during the prevalence of all epidemics, no matter what the diathesis, so mild as to require no treatment at all. And it may be that most of the cases, however violent, would have yielded to other remedies, not so direct as blood-letting, but operating upon the same curative principle.

It were well for science and humanity, if the simple and comprehensive truth of these admissions could pierce the mental armor of those Polyphemi of the profession, who regard the most enlightened eclecticism as a medical Gallilee, out of which no good can come, and who would immolate whole hecatombs upon the altar of a *specific*. I have called this truth simple and comprehensive; and it is so. It pervades the universe, and is an element in all the varied operations of nature; and in all else, save the healing art, is as familiar, and as commonly admitted, as it is simple. It is, that there are various ways and means, by which the same end may be attained, the same thing accomplished. To deny this, in relation to any thing else than medicine, would justly subject a man to the epithet of idiot or lunatic. Yet, no department of human affairs is more pregnant with its value, or more demonstrative of its force, than medicine. His "cases of emergency" alone, furnish to the physician, who has any practice, conclusive proof of it; for there, by the use of means, which to the uninitiated seem the most *outré*, and unlike aught that had ever been applied to such purposes before, he has often been enabled to accomplish the most im-

portant objects, simply by knowing that the same *principle* of action runs through various and dissimilar means. He who has never overcome constipation of the bowels, by the use of the lancet, and, sometimes, even by a dose of opium, has, I apprehend, cultivated but a limited field of practical observation. It is told, in derision, of a Princess of England, (perhaps of her present gracious Majesty) that, upon learning that a portion of the liege subjects of that "free and happy country" were in a state of starvation, she exclaimed: "I would eat bread and cheese rather than starve!" And yet, this Princess, culpably ignorant as she was, of the condition of her people, was *wise*, in comparison with our medical exclusives, and sticklers for specifics. *She did* know, intuitively perhaps, that the same principle of nutriment was to be found, alike, in the dainty luxuries on which she had fed, and in the very dissimilar articles of homely bread and cheese; while *they*—philosophers, too!—*cannot be taught* that when we would reduce inflammation by *depletion*, that principle may be brought into action by means, either of bleeding, purging, puking, or sweating, &c.; the peculiar circumstances of each case, rendering the one or other of these remedies the more eligible means. I have not run into this digresssion without design. It has not been, however, so much to find fault with the views of others, as to set forth, upon its true ground, my own preference of particular remedies; and, in this instance, of blood-letting. I have said that in this epidemic, I considered blood-letting the prime and efficient remedy. But, after what I have said about exclusiveness, I cannot be understood as contending that it was indispensable to, or alone capable of affording, relief. By no means. I do insist, however, that in *all* inflammatory diseases, the abstraction of blood being the most *direct*, should be the *prime*, and will prove to be the most *efficient* curative means. This is a general therapeutic principle, which I believe to be as sound and immutable as truth itself; modified, however, but only in its *application*, by the variety of cases.

While in the spirit of digression, I must pay my respects

to those practitioners, some of whom it has been my misfortune to meet, who seem to be afflicted with *Hæmatophobia*, (if I may coin a word). These gentlemen, according to my observation, may be divided into two classes, on account of the two kinds of influence under which they respectively, yet alike, manifest their "holy horror" of blood-letting. The one class seem to me to oppose blood-letting for the very reason which mainly induces me to prefer it: because it is a *direct* remedy, in its application and results: because it can be understood and appreciated by the common mind, and is not enshrouded in mystery. Mark—with what unction these same gentlemen will roll an *anti-bilious pill*—measure, with nicest exactitude, an *alterative mixture*—and adjust the scales, "to the ninth part of a hair," in weighing out a *deobstruent powder!* tasting and smelling, the while; and looking as solemn, and as wise withal, as the sage bird of night! Might I venture on a comparison, I would call them a sort of *mental prism*—incapable of receiving into themselves, or of transmitting, the rays of light in *straight* lines, as they come down upon them from the great sun of nature's truth; but *refract* and pervert them to unwise, and sometimes, alas! to unholy ends. To them, it is folly in the extreme, to come boldly out into the light; but the profundity of wisdom, to burrow, like a mole, along the dark and devious track of indirection. The other class, who are certainly the more respectable—because the more honest, seem to oppose blood-letting, because, forsooth, they remember to have heard that, in holy-writ, it is declared—"Whoso shedeth man's blood, by man shall his blood be shed." A literal interpretation of the text, truly! and worthy of the days of witch-craft. It can be matched only by a kindred interpretation of another portion of scripture, once perpetrated by a young lady of my acquaintance. This young lady, at church one day, was dismayed to hear that it was forbidden to use *feathers* for personal adornment. Terror-stricken at the *enormous* sin she had been so ignorantly committing, she hurried home, and incontinently emptying out the contents of the *pillow*, with which she had exaggera-

ted her fair proportions, refilled the sack with a "bale of *cotton*," instead of feathers. And, thus, by a literal *ruse*, was my fair friend enabled, without any "compunctious visitings," and with due modesty, to wear both her conscience and her *bustle*. These instances speak well, doubtless, for the conscientious scruples, and simple piety of these enlightened practitioners of medicine, and of this ingenious young lady; but they make, at the same time, a lamentable, and a ludicrous, exposure of their want of discrimination. These persons seem utterly incapable of distinguishing between the naked act itself, and the motive and object which prompt to its commission. With them, it is a crime to draw blood; whether to destroy, or to save life, is no matter.

It is a dogma of a noted charlatan, whose followers are, even now, scattered over this land, that "the blood is the life of man;" and that, therefore, to shed a *drop* of it, is, *pro tanto*, to be a murderer. "'Tis true, and, pity 'tis, 'tis true!" that this absurdity is not limited to "the blind followers of the blind;" but attaches, with disgraceful and fatal tenacity, to some who claim, by right of *parchment* too, a joint-tenancy in the domain of medical science.

Again, there are others, who are driven from the abstraction of blood, by fear of the goblin-sprite *debility!* which, with the damps of death distilling from its wings, has too long hovered over the morbid world. To these last, I would suggest that, in a vast number of cases, debility is but a *simulation*, and, consequently, is then most readily removed by blood-letting; while, even in those cases where it is really present, certain modifications of this remedy are, still, the most efficient means of relief; for, let it ever be borne in mind, that *debility*, however certainly present and prominent, in any case, is always a *symptom*—a consequence, and never a *cause*—or essential character of disease. And to all, whether the lovers of *indirection*, the tender of conscience, the followers of the charlatan, or the slaves of their own timidity, I would say without the fear of successful contration, that for every *single* case wherein they can show me

the evil consequences of blood-letting (though I will not deny that evil has followed it), I will point to hundreds who, for want of its timely use, "have died of medicable wounds."

I will return now from these, perhaps unprofitable, digressions; and conclude this paper with a few remarks more directly bearing upon the subject in hand, and particularly upon the cases I have reported.

I repeat, that in all the cases of the influenza which I saw, the inflammatory diathesis was strongly marked. In some cases, as is found in all epidemics, the attack was so slight, that nature was competent to her own relief; but even in these, the tendency was to inflammatory engorgements in the most exposed and susceptible tissues; and analogy warrants the belief that depletion of some kind, particularly blood-letting, would have hastened the cure. In more violent cases, the inflammatory action was more decided; but yielded readily to depletion, as bleeding and gentle purgatives. In my own case, which was among the first that occurred in the city, and quite threatening from the rapidity and violence with which the inflammatory symptoms were developed, the disease was arrested almost at once, by one very free bleeding (nearly ℔iv.), and a gentle cathartic. In several similar cases, but little more was required. But, in the cases of greatest violence, such as I have reported, and particularly the last two, other and more persevering treatment was demanded. It will be seen that in them, I not only bled, but purged, and used other active remedies, of known power to reduce inflammatory action. In rheumatic inflammations, and other affections wearing their livery, I had been long accustomed to use, with success, tartarized antimony combined with opium. Finding, in these cases of influenza, a strong family likeness of rheumatism, I resorted, with confidence, to this potent remedy. At my own suggestion, I should not have used the colchicum or lobelia, either singly or in combination. I was induced to do so on the advice of my talented friend Dr. John R. Buck, who, at the time, was using the particular combination I prescribed, with marked advantage, in many cases of influ-

enza, and analogous affections. He was led to use it himself, and to recommend it to me, in view of the strongly manifest rheumatic and bronchitic symptoms coexisting in all the cases. In his cases, Dr. B. is satisfied of its efficacy; and his judgment is to be relied on. But, where I used it, I used, at the same time, other well tried remedies which, heretofore, had not failed me in time of need; and I am not prepared to say how much of the cure must be ascribed to the new, and how much to the old remedies. It is but right, however, to add, that in a few cases of a very mild character, where I was requested to prescribe for a cough, and slight muscular soreness, I prescribed the combination alluded to, on account of its neat and eligible form, and was gratified to find it intirely successful.

Of the particular cases reported, I will remark: That case number one, was, as regards the symptoms peculiar to influenza, but little beyond the average of severity. The main suffering of the patient was caused by the complication of painful amenorrhœa. Case number two, was among the severest, if it were not the very severest, that occurred in the city. I have never seen any case of disease where the inflammatory action ran so high, and, at the same time, involved so extensively the fibrous system. From the neck, downwards, no muscle, ligament, or cartilage, seemed exempt. I am satisfied that the diaphragm, and the *heart*, were seriously implicated. To this last, I attribute the peculiar character of the pulse. It will be remembered, also, that the blood in this case, presented a remarkable appearance: the form of the clot, and the great amount of *fibrous crust.* If the buffy-coat be, as is generally held, the sign and *measure* of inflammatory action, then this may well stand at the head of inflammatory cases. I think, however, I have observed, that, *cæteris paribus*, the fibrous crust, or buffy coat, of drawn blood, is always most abundant in inflammations of fibrous tissues, particularly in rheumatism. I have never observed it in the simple phlegmasiæ of mucous membranes. Does this accord with the observations of others?

Case number three, was one of great severity. There were circumstances, however, well calculated to exacerbate all its symptoms beyond the ordinary range of the epidemic. The feeble health, and excitable condition of the patient, particularly of the nervous and circulatory systems, owing to previous severe and exhausting attacks of various and complicated diseases, rendered her peculiarly liable to suffer exceedingly, and even to sink, under any present attack, of even ordinary severity. Besides, the case had been either neglected, or treated very timidly in the beginning. So that, we found not only a bad original subject, but one in which disease had been allowed, almost unmolested, to take a firm hold, even of the very heart-strings. This last is literally true; for that the heart, in this case, was seriously involved, no one can doubt who will study the case. Indeed, when I first saw her, such was the extraordinary vigor of the pulse, that, taking into account the age, feeble frame, and delicate health of the patient—particularly as she had been long subject to pain in the chest, occasional difficult respiration, and palpitations of the heart, I suspected the existence of chronic hypertrophy of the heart, upon which had supervened the acute *carditis*. The result of the case, however, removed the suspicion of hypertrophy.

It was my purpose to have prepared the foregoing cases, &c., for the September number of this Journal; but I have deferred it until now, in the hope of being able to compare notes, usefully, with some of my correspondents, both north-east, and south-west, of this place; but, in the main, I have been disappointed. My esteemed and intelligent friend Dr. J. Robert Ward, of Maryland, alone, furnishes me information which I can turn to useful account. In his letter of 22d August, he gives me a very clear and interesting account of the influenza, as it prevailed at, and in the vicinity of, his residence—*Clear Spring*. The symptoms, as described by Dr. W., correspond very accurately with what I have observed and described. A tolerably close correspondence, too, may be observed in the treatment pursued by each. In his

own words:—"I have used the lancet, salts and magnesia, salts and soda, and followed them up with tartar-emetic, and tr. of opium." He further observes, that: "when more active cathartics were used, a troublesome diarrhœa was the result." As to the pathology, Dr. W. expresses views not so accordant with mine. At first, he believed, with me, that the disease was decidedly inflammatory; judging both from the symptoms and the effect of remedies. Subsequent observation and reflection, have shaken, if not changed this opinion; and chiefly because the disease was of such short continuance (rarely continuing, with any severity, "more than thirty hours") and yielded so readily to comparatively mild remedies. He inclines to the opinion that the seeming violence of the symptoms, and the great suffering of the patients, resulted from exalted sensibility, which might be characterized as a *nervous erethism.* Had I not, already, occupied too much space, I think I could easily show that this, although plausible, is not the proper view. But whether his or my pathology be true, he considers the proper treatment was the one pursued. He deems the colchicum and lobelia particularly adapted to his view. Without controverting any of his opinions, I conclude by tendering him my respectful and sincere thanks for his kindness and courtesy.

Louisville, Sept. 22d, 1843.

Selections from American and Foreign Journals.

Medical Faculty of Minorca.—The Faculty at the Balearic Islands are under the direction of the Royal Medical Junto at Madrid, without whose license no one is permitted to practise medicine or surgery within the dominions of Her Catholic Majesty; and all persons violating this law are subject to a heavy penalty which may be imposed by any of the courts. This statute, intended for the promotion of medical science, is in reality, the great obstacle in the path of the advancement of the character of the profession in Spain; for the license can always be purchased in the present crippled state of the public treasury, and the course of professional education and examinations, necessary elsewhere, is not required to procure this royal permission. The medical sub-delegate for Mahon is Dr. F. Hernandez, a gentleman of liberal education and handsome professional acquirements; and there are several other men here, at the head of whom stands Dr. Sancho, whose abilities and gentlemanly deportment would secure to them a high rank, wherever such qualities are appreciated; but amid the ignorance and prejudices of Mahon, their light is under a bushel. These men are eclipsed in their professional celebrity by a host of uneducated and illiterate *Medicos*, who by means of bribes have obtained the royal licence; and, dealing in the nostrums and adopting the popular prejudices of the superstitious natives, they not only monopolize the practice, but what little money is paid for medical advice, is sure to fall into their hands. At the head of these is a man of much natural tact and cleverness, and who has not only placed himself at the head of the practitioners, but has also made himself one of the leading citizens of the Island. In early life he followed the avocation of a barber, which probably initiated him into the gossip and tattle which, even in more refined and fashionable cities, form so neces-

sary a qualification for the success of the physician. To this, he unites great moral courage; he boldly plunges into every operation, and usually succeeds in making it redound to his credit, however fatal it may have been to his patient. It is scarcely necessary to add, that this is the individual who boldly plunged the knife into the popliteal aneurism of Mr. V., before mentioned, which occasioned his premature death. The British consul exhibited to me a urinary calculus, which this surgeon had extracted, a short time before our arrival; but unfortunately the patient, a shoemaker, had been taken from his work-bench, without any preparatory treatment, to the operating table, from which he was carried a lifeless corpse; and the stone was not removed until after his death. This individual monopolizes the most lucrative practice of the city; and with an ostentatious display of his property, throws into the background all his professional opponents. There are but few horses at Mahon, and to be able to keep one is the most conclusive evidence of being a *cavallerio.* This man accordingly makes his daily rounds to his patients, mounted. As Dean Swift says—

> It is indeed a very sorry hack,
> But that's of course,
> For what's expected from a horse,
> With an apothecary on his back.

Carrying heavy holsters and pistols, with a golden band around his cap, this disciple of Æsculapius looks but little like an humble practitioner of the healing art.

In consequence of our introduction to surgical practice in the case of aneurism before mentioned, we were asked to do several operations, which gave us a reputation that would not have followed elsewhere. Cases flowed in upon us with great rapidity, from all directions, and in this way most of the remarkable cases came under our observation. Thus we learned much of the state of the profession, from the treatment pursued in those cases; and among these processes of cure, charms, amulets, and the superstitious influence of the Church, had a large share. The priest sells amulets to ward off and cure the tertian fevers; keeping a cross, they say, made from the fig-tree, over the heart, will have the same effect; and eating salt, while looking at the new moon, will also prevent fevers. We will not deny, however, in view of the influence of mind upon the physical frame, that the recurrence of a tertian, kept up perhaps by habit, may thus be sometimes prevented; but if these practices are not regarded

by the reader as absurd in the highest degree, the two following examples will certainly rank as such.

We were called in consultation in the case of the wife of the Dutch consul,—a most estimable lady, with an interesting family,—who, at the time of our seeing her, was almost in *articulo mortis* from intussusception. In this condition, a sheep was brought into her chamber, slaughtered at the side of her bed, the omentum taken warm and reeking from it, and placed upon her abdomen,—a remedy that the native physicians assured the family would give immediate relief. On another occasion we were called to see the child of Orfila, a connexion of the distinguished President of the Medical Faculty of Paris, who is a native of Mahon. We found the little patient in the last stage of hydrocephalus; the pupils were dilated, and sensibility almost destroyed. On the crown of the head, a pigeon had been tied, the poor bird having been cut open and applied warm with the feathers on, the blood at the same time streaming down the little patient's face, imparting the most forbidding aspect, as it lay upon its mother's arms. The doctor, during the same time, was lecturing, in a pompus and boisterous manner, upon the virtues of a warm dove—the emblem of innocence—applied to the head of an innocent babe, to draw out all the bad humors which may have collected there.

The medicines in universal repute for almost every disease which "flesh is heir to," are Morrison's pills and the purgative mixture of Le Roy. The former is for sale at every shop in the country, accompanied with a pamphlet in the Spanish language, printed in London, setting forth, in glowing colors, the incredible virtues of this panacea; all of which is readily believed by the ignorant, who swallow these pills without limit. Many instances of their injurious, nay fatal consequences, came under our observation. Among these was the case of a paymaster in the Spanish army, who, after six years of active service in the field, during the civil war, reached Mahon, worn down and exhausted by the incessant labors and exposure of the camp. Immediately after his arrival, he was placed on the use of Morrison's pills, taking large doses of them daily. The excessive purging increased the prostration under which he had previously labored, and mortification took place in one foot, which, after great sufferings, came off at the ankle. In another case, of an old friar who had suffered for years from asthma, these pills were directed in immense quantities, which were increased as he grew worse. At length, unable to take the pills, they were dissolved and ad-

ministered in solution; and we were informed by Sintès, a most respectable druggist, that within six days he had taken more than five hundred pills,—a cause quite sufficient to put a period to his existence. Whatever good these pills may have accomplished in England, the evil that they have occasioned in this little Island will more than counterbalance; and it is much to be regretted, that such remedies are sent abroad, with all the emblazonry of noble patronage at home, only to deal misery and death among the unfortunate and too credulous, who suppose that, because they come from Britain, where the medical profession are known to possess so much ability, they must necessarily be useful for all the diseases for which they are recommended. Upon the mercenary authors of this wholesale murder rests a fearful and a dreadful responsibility, and although they may escape human laws, yet a retributive justice awaits them hereafter.

Our practice being in every case gratuitous, it soon became extensive; and we rejoiced to have it in our power to assist, by medical advice, the large number who were suffering from the want of it. But when fully engaged in the midst of our career, we were officially notified by most formidable bulletins from the medical sub-delegate, that, in consequence of our not having a licence from the Government at Madrid, we must for the future desist in our practice. At the same time, we were informed by him, that it was, on his part, only a matter of form, which he was compelled to adopt in virtue of his office, and that we might continue to render our services as heretofore. He assured us that there would be no further proceedings in the case; and, accordingly, we continued to prescribe and operate whenever necessary; and in every operation of importance, a majority of the faculty, with the medical students of the town, were always present. In a short time, however, we were duly ordered to appear before the chief-justice of the Island, and answer to a long series of charges for operating and rendering medical advice, in various cases duly mentioned, after having been notified by the proper officer to desist.

Trial by jury is here unknown, but fortunately the judge, before whom the case was brought, was our friend in return for some small service rendered to a member of his family. These proceedings at court were conducted with an ingenuity which would have been creditable to a Philadelphia lawyer, or some of the gentlemen of the long robe at Westminster Hall. We will, therefore, mention one or two of the most important points. The first case mentioned in the indictment

was for having extracted a cataract from the eye of Mr. Escudera, in the presence of some ten or twelve of the citizens of Mahon; and although all these gentlemen were present, yet the fact of the operation was not proved to the satisfaction of the court. One did not look on while operating, another did not see the lens extracted, a third did not know the day of the month on which it was done, and a fourth stated that it was in the afternoon and not in the morning, as set forth in the indictment; all of which was deemed sufficient to acquit us of the charge. During the investigation, the judge received several abusive threatening anonymous letters, the authorship of which was attributed to one of the native physicians, who, upon being charged with it, plead "not guilty." The writing was disguised, but, unluckily for the author, the very fact that he did not find an education necessary to the art of physic, served for his conviction; for, as the letter contained many errors of orthography, the judge directed him to write a copy of the letter as it was dictated to him in court; and, when compared with the anonymous letter, unfortunately for him, every error was found to correspond precisely, notwithstanding the handwriting was entirely different.

The decision of the court was in our favor, and the cost, amounting to forty dollars, was ordered to be paid by the Medical Association of the place; but this event was followed by an open declaration of war on the part of the united faculty, who drove us from the field by the following formidable document, through the hands of O. Rich, Esq., U. S. Consul, and Commodore Isaac Hull:—

"*Subdelegation of the Medical Junto at Mahon.*

"Sir,—It has been repeatedly complained of to the Medical Subdelegate of Mahon, that you gave and still give advice, and practice as a Physician and Surgeon among the citizens of Her Catholic Majesty's dominions, without the Royal licence. You, are, therefore, hereby notified, positively and peremptorily, to discontinue all such practice for the future; and you are not permitted to perform the functions of a Physician or Surgeon to any other individuals than the Anglo-American citizens of your own country.

"I kiss your hand,

"F. HERNANDEZ, *Medical Subdelegate.*

"J. M. Foltz, *Surgeon U. S. Navy.*

After the reception of this missile, we declined giving our advice to such as applied for it; but a few days after, a child was brought to us from Barcelona, in Spain, with club feet,

which was of proper age and in an excellent condition for an operation. At the same time, a lieutenant of the Spanish army applied for aid, with a permission from the governor for us to prescribe in his case, which we offered cheerfully to do, on condition that permission would be also given to operate on the child; but this his excellency refused to grant. Still desirous to relieve the child, which had undergone the dangers of a voyage at sea for the purpose of having this operation done; we proposed to operate on board one of the ships of war in the harbor; but the father, a British subject and a man of some property, prudently declined, as he was convinced should we operate after the positive refusal of the governor, that the opportunity would be gladly seized upon to impose on him a heavy fine. The child was, therefore taken to Marseilles, at the hazard of another voyage at sea, to have an operation done, which could have been performed here in two or three minutes.

We have been particular in detailing these cases, as they will not only give a correct idea of the condition of the medical profession in Spain, but will also apprise the reader of the oppression of the government. The only hospital or charitable institution at Mahon is an hospital for foundlings, which is liberally endowed, having at this time about one hundred names upon its register entitled to its charities, among whom are twenty-seven children. Every child deposited here can ever after claim the shelter of the institution; and, although usually placed out to masters as soon as they reach a proper age, yet they ever look to this establishment as their home in after life. There is throughout the Island no dispensary for the distribution of medicines to the poor; and, so far as we could judge, there is but little charity to them from the medical men. They are, indeed, compelled by their own wants to ask some remuneration for their services, insisting usually upon some fee, and being willing to take the most trifling amount rather than go away empty-handed. As we were ordered, shortly after these doctors' quarrels, for service afloat, the little ill-will occasioned for the moment was soon "in the deep bosom of the ocean buried." We shall, indeed, ever rejoice to hear of their individual and united prosperity, for there are among them many of whom we shall ever have the most agreeable and pleasing recollections, and we shall pray that the causes which have occasioned their present humble position may speedily be removed.—*Dr. Foltz* in *New York Journ. of Medicine.*

Necrosis of the Skull.—By O. Hill, M.D., Detroit, Michigan.—On the 13th of February last, whilst residing in Niagara county, New York, near the Falls, I was called to examine a female patient, aged about 45, laboring under extensive disease (necrosis) of the skull, of long standing. Her short history of the case was as follows:—About twenty-five years since she received an injury upon the left side of the head, from the falling of a stone from a building, which produced, as was then supposed, a slight fracture of the outer table, with severe concussion, rendering her insensible most of the time, for ten days. She recovered, however, under ordinary treatment without an operation, so far as to be able to go about her usual business. From that to the time of my first visit, has had at intervals, partial derangement of the mental faculties, confusion and want of consciousness of time and place; continuing sometimes for a few days, but remembering with accuracy all that happened up to these periods, and afterwards. Partial paralysis of the superior extremities of the side affected, and general wasting of the muscles and integuments. Small ulcers occasionally opening at different points in the scalp, discharging more or less sanious matter, which always relieved the confusion of ideas at the time. These openings would again close and remain so, sometimes from one to three years. About five years ago, as she says, "she was exposed to severe cold and froze the top of her head." Immediately after which, two large openings appeared, the size of a quarter of a dollar, one directly over, and within an inch of the left superciliary arch; the other an inch above the middle portion of the lambdoidal suture. From these ulcers a profuse discharge has constantly kept up for the last three years. On examination I found a small spicula of dead bone pointing at each of these ulcers. Seizing the two points with strong forceps, the whole left side of the skull seemed to be slightly moveable.

The constitution of the patient had become so enfeebled by the long-continued exhausting discharges, and her situation and circumstances not very conducive to recovery, I deemed any operation, at this late period hardly warrantable. However, as the patient and her friends were not only willing, but very anxious that something should be done, I resolved to undertake the removal of the dead bone, as the only remaining chance for her safety—as the system was fast sinking—and even this afforded but little encouragement, for it was impossible to foretell the nature and extent of the operation

required, by an external examination. The inference was, that the powers of life must soon yield, and that any operation, however hazardous, would not materially hasten that period. This was the sensible reasoning of the patient.

The patient having already prepared herself, was placed on a seat, with the head inclined towards the *only window in the house*, and well supported by an assistant; I proceeded to divide the scalp, carrying the scalpel from one opening to the other, a distance of about seven inches, half an inch to the left of the median line, or sagittal suture. This at once exposed the whole extent of the bone, it being denuded mostly of its pericranium. After securing two or three branches of the occipital and temporal arteries, as they were much enlarged, the scalp was thrown off each way from the incision. On the left side the dissection was carried to within an inch of the squamous suture, before the outline of the disease could be determined in that direction. The left parietal bone was loose, and easily separated from its fellow, at the sagittal suture, so that the elevator could be introduced without the use of the trephine. Here a difficulty occurred in raising the dead bone, as it embraced all of the parietal, anterior to the parietal foramen, and more than half the left os frontis, so interlocked with spicula of new bone, that to throw out so large a piece, with its ragged edges, the elevator under one side only, would probably endanger the brain. I next proceeded to divide the dead portion with the cock's comb saw, near the line of the coronal suture, then by means of two or three elevators, raised and removed the frontal portion first, a partial line of demarcation having taken place. Here the saw also became necessary, as many points of new bone were found shooting and interlocking into the dead portion, requiring to be separated before it would yield to prudent force; then raising the sagittal edge of the parietal over its fellow, I drew it forcibly from its connection with the os temporum, at the squamous suture. This at once exposed the entire superior surface of the cerebrum of the left side, covered at rome points with pus and sanious matter, presenting the appearance at first view of one general diseased mass. The dura mater was wanting, as was also the pericranium—the disease having extended from the external to the internal surface, and throughout its whole extent.

Here many points of deep interest attracted our attention. On clearing away the matter, the brain, with its pia mater in perfect order, was seen packed away, as if intelligently avoiding injury, occupying the lower part of the cavity, leaving a

space above between it and the bone, of an inch and a half, or more, and by its violent pulsations gave abundant evidence that it was still striving to perform its functions. The longitudinal sinus was seen enclosed in its fold of the dura mater, having been detached by the ulcerative process from the dead bone, but adhering firmly to the healthy side. I do not mean to be understood that the whole of the parietal bone was removed. A line drawn from the parietal foramen to the highest point of the squamous portion of the temporal bone, would be about the line of demarcation. Thus avoiding most wisely, the principal branches of the great meningeal artery—leaving, of course, the temporal and occipital angle of the bone sound. The patient was calm and collected during the whole operation, which occupied nearly half an hour, answering questions intelligently, except for a moment when the brain was first exposed; and when attempts were made to clear the surface, she seemed drowsy, complained of deafness, and inclined to faint, but soon roused by the use of diffusible stimulants and wine.

The wound was cleansed, scalp replaced, and secured by sutures and straps, and the patient put to bed—feeling, as she expressed herself, much better than she had done for years before. Previous to the operation for a long time, she had been afflicted at times with extreme pain down the left side of the neck, extending to the left lung and stomach, occasionally cramp of the left arm and muscles of the neck, twitching of the left eye, &c. All these difficulties ceased the same day of the operation, and have not returned up to this time. The patient was immediately put upon a liberal nutritious diet of animal food and porter, and every attention paid to her comfort. No unusual degree of inflammation arose. The scalp healed kindly by the first intention, osseous matter soon began to be deposited, and up to this time (six months since the operation) has continued to do well. Bony arches are shooting over at many points, which, with a slight approximation of the sides of the opening, is fast forming a substantial covering. A small opening was left for a few weeks, at the anterior axtremity for the exit of matter, through which the brain could be seen gradually expanding, and apparently resuming its functions. The patient walks and rides, is cheerful and intelligent, and bids fair to repair the breach yet to a very considerable extent.

Perhaps it may not be unworthy of remark, that the facts in this case, go to establish a physiological *fact* of vast practical importance, that the human system, physically and men-

tally, is made up of two distinct halves or parts, that their functions are not necessarily connected, but may, and do, go on independently. I say of vast importance, in a practical point of view, because it teaches us that lesions of structures, and even a total loss of portions of the most important organs, do *not* stop the machinery, or necessarily prove fatal to the animal. Hence we might often be induced to resort to remedial measures, and as often be astonished at our success, in many cases that are now abandoned to their fate, through the timidity of the practitioner, to act with boldness and decision. As in the foregoing case, one half of the cerebrum was packed away, its healthy functions suspended, and therefore useless, if not destroyed, as was evinced in the corresponding deviations from healthy action in remote parts depending upon it for their sensations and motions, if not for their vitality. Yet the nutritive, respiratory, digestive, and and all other functions, the senses, &c., were carried on, as it appeared, for years with sufficient force and regularity, for all ordinary purposes. The other animal, or the other half, must have been in a comparatively normal condition, to have sustained all these functions alone, *so* perfectly, and no direct connection, nervous or otherwise, could have existed between the parts diseased, and the corresponding healthy parts. This case may also serve to establish the notion of the insensibility of the upper surface of the brain; at all events experiments of this sort, upon the living organ itself, is the only way to arrive at any conclusion on this point. In this case the effects upon the nervous system did not seem to arise from irritation and disease of the surface of the brain, but from pressure by the pent up matter, and thickening of parts. The brain was handled, sponged, and thoroughly cleansed, without any evidences of pain in the part, or extremities—the patient only appearing a little dull, from pressure of the sponge. Besides, all the unpleasant symptoms, before mentioned, as indicating disturbance of the nervous system, subsided immediately on removing all pressure, leaving no traces of irritation or inflammation. I forbear any further comments.—*Boston Medical Journal*, Sept. 13, 1843.

Extraordinary Case, in which the arm was torn off at the Shoulder-joint, by machinery, communicated to Prof. Willard Parker, by Jas. S. Cooper, M.D., *of British Guiana, South America.*—I was called to a neighboring plantation to see

Daniel, aged about 7 years, son of one of the laborers. On arriving, I found a case of a very serious nature. The boy, while playing about the sugar-mill of the estate, had been caught in some of the machinery, and his left arm was torn off, bringing with it about two-thirds of the scapula. The deltoid muscle was carried away entire, and the trapezius was torn from its attachment to the clavicle, the naked end of which bone was protruding through the wound. Notwithstanding the very large amount of surface exposed, there was not the slightest hemorrhage, although reaction had fairly taken place.

With the assistance of Dr. Walker, the medical attendant of the estate, I proceeded to dissect out the remainder of the scapula, (the inferior and posterior portion). A little bleeding ensued from the scapular arteries, but it soon ceased on pressure being made. Then, with a small saw, I removed the external third of the clavicle. As there was no necessity for tying a single vessel during the whole operation, the wound was now closed with sutures and adhesive straps; and the dressing was finished, by applying a compress and roller around the body. The patient bore the operation well, and soon after fell asleep.

Dec. 16.—Considerable febrile action—pulse 120—tongue furred—wound rather painful. Ordered a slight purgative and left him.

20th.—Every thing has gone on well up to this day; the wound was dressed; about half of it had united by the first intention, and the remainder is suppurating kindly. There is no fever; and the patient is every way comfortable, sitting up in bed, he having taken a full meal. The sutures were removed; and from this time onward he recovered rapidly.

New York Journal of Medicine.

Emmenagogue Medicines.—Of emmenagogue remedies, or those medicines that are supposed to possess a specific power over the womb, and which have been resorted to by medical men in cases of amenorrhœa for reproducing the menstrual secretion in conjunction with the general treatment, the following appear to have proved most successful.

Savine—from five to ten grains of the powdered leaves three times a day, or a drachm of the compound tincture twice a day.

Dr. Locock recommends a combination of myrrh, aloes, sulphate of iron; and the essential oil of savine.

Ergot of rye—five to ten grains of the powder two or three times a day, boiled in a little milk. In very irritable habits the ergot must be cautiously administered, as it has been found, after a few days, to produce sometimes violent and even highly dangerous spasmodic attacks.

Iodine in form of tincture, with hydriodate of potash—ten to twenty or thirty drops, two or three times a day.

Strychine—one-tenth to one-fourth of a grain, two or three times a day. This medicine must be suspended for a few days, should headache or twitching of the muscles follow its exhibition.

Madder, myrrh, guaiacum, mustard-seed, valerian, electricity, aloes, have all had their advocates.

In Dr. Ashwell's report of obstetric cases, vol. iii., Guy's Hospital Reports, out of nine cases of amenorrhœa admitted into the hospital, seven simple and two complicated, "six of the simple cases occurred in the persons of delicate females, and the remaining patient was a strong, active, plethoric girl of nineteen. The former was treated by aperients and metallic tonics; four employed the ammoniacal injection with benefit; while electricity in some cases seemed to be of great service in exciting menstruation."

In cases of *amenorrhœa combined with epilepsy*, Dr. A. employed the following formula, recommended by Dr. Bright:—

℞ Pulv. digitalis, gr. j.; Pulv. myrrhæ, gr. ij.; Ferri sulphatis, gr. j.; Syr. q. s. ft. pil. ter die cap.

"Under this treatment the fits became diminished in number, and the menstrual function normally established."

Braithwaite's Retrospect.

The Free-and-Easy Style.—The greatest attainments in medical science will not of themselves compensate for the due reserve and decorum which characterise the gentleman in any walk of life, but which is supereminently demanded from members of such a profession as that of medicine. A case in point is afforded by the following anecdote, which, if not true, at least deserves to be so:—A certain physician in Paris, who also filled a professor's chair, having found practice coming to him but slowly, and remarking at the same time that other physicians who were in good practice, were on familiar terms with some of their female patients, suddenly conceived

that he had discovered in the latter circumstance the secret of his rivals' success, and resolved to adopt the marks of intimacy on the first fitting occasion. An occasion arrived. He was sent for by a lady of respectability, whom we shall call *Madame Quelq'une*, of the *Rue Joubert*, No. 1000. Having been announced, he walked boldly into the room, and taking his patient by the chin, exclaimed, "Well my dear! and how are you to-day?" The astonished lady promptly replied, "I am very well, Sir, as I will prove to you;" and thereupon rising and ringing the bell, she said to the servant who appeared, "Pay this physician his fees for two visits, but recollect that when he calls again, I am not at home!" The chop-fallen physician left the *Rue Joubert* with a rueful countenance. But the worst was behind. The lady sent for another physician, who was both a gentleman and a witty man, and who, oddly enough, had been a pupil of the professor. After various inquiries, the new medical attendant found it necessary to percuss the chest, an operation which the lady readily permitted, warning her medical adviser at the outset, however, that there was one region, the exploration of which she could by no means permit. Day after day the physician continued his visits, each day he percussed, and he was as constantly reminded of the prohibition. At length his curiosity having been raised quite on tip-toe, he ventured respectfully to inquire which *was* the interdicted region, and to his great surprise learned that it was *the chin*. The patient, who had long been bursting with the secret, now recounted to her Æsculapius the adventure and mishap of his predecessor, and the pupil resolved at some time to read a lesson to his *ci-devant* master. The opportunity very speedily arrived. As he was returning homeward—on foot—he met, surrounded by a posse of pupils, his old preceptor, who, having just left his professorial chair, was about to enter his cabriolet. The professor, thinking this a capital opportunity to inculcate an useful principle into those around him (and perhaps also to show the authority wielded by a physician who kept his cabriolet over one who was obliged to walk), thus addressed his former disciple:—"My dear ——, you seem to have quite forgotten me, and what you owe to my instructions; you never call me in to a consultation!" "Well," said the other, hesitating for an instant, "I recollect. To-morrow, at 2 o'clock, there is to be a consultation, at which I shall be happy if you will assist." "Come, that's hearty!" said the professor, shaking him by the hand, "I begin, after all, to think that you have not quite forgotten your duty. But I had forgotten

(he added, as just about to step into his vehicle) to ask where the consultation is to be held." "At *Madame Quelq'une, Rue Joubert*, No. 1000." The professor vaulted into his cab as if impelled by a rocket, cloaked himself up in a moment, put the horse at the top of his speed, and was off like a shot, next day quite *forgetting* the consultation,—so says the *Gazette des Hôpitaux.—London Lancet*, July 8, 1843.

An account of a case in which a Foreign Body was lodged in the Right Bronchus.—By Sir Benjamin C. Brodie, Bart. F.R.S., etc., etc.—The author's object in this paper was to describe a case in which a half-sovereign was lodged in the right bronchus of the patient for a period of thirty days, and in which certain novel measures adopted for its removal proved successful. It was on the 3d of April, while the patient, Mr. B.,* was amusing some children, that the coin which he had in his mouth accidentally slipped into the trachea. The symptoms which succeeded were principally occasional severe fits of coughing, and a sense of pain referred to a part of the chest corresponding to the situation of the right bronchus. No particular sounds were detected by the use of the stethoscope. The patient was able to pursue his usual avocations, and made two journeys into the country. On the 19th of April, having placed himself in the prone position, with the sternum resting on a chair, and his head and neck downwards, the patient had a distinct perception of a loose body slipping forwards along the trachea; a violent convulsive cough ensued, and, on resuming the erect posture, he again had the sensation of a loose body moving in the trachea towards the chest. An apparatus of the following kind was now constructed. A platform, on which the patient could lie prone, was made to move on a hinge in the centre; so that on one end of it being elevated the other was equally depressed. On the 25th of April the patient was laid on the apparatus, with his shoulders and body fixed by means of a belt, and his head was lowered to an angle of nearly 90 degrees with the horizon. His back was then struck several times with the hand, but violent fits of choking were brought on each time, and it was not deemed prudent to continue the experiments. On the 27th it was agreed in consultation to make an opening in the trachea, between the thyroid gland

* Brunel, the projector and engineer of the Thames Tunnel.

and the sternum. In proposing this, the object was twofold: 1st, that an attempt might be made to extricate the coin by the forceps; 2d, that if relief could not be obtained in this manner, the artificial opening might answer the purpose of a safety-valve, and the experiment of inverting the body on the platform be repeated without the risk of causing suffocation. The operation having been performed, several attempts to extricate the coin were made, but without success; and, on each introduction of the forceps, paroxysms of convulsive coughing of such a violent kind were brought on, that it was plain that the attempts could not be persevered in without danger to life. On the 2d of May, a renewal of these trials was followed by the same results. On the 13th, the wound in the trachea having been kept from closing by the occasional introduction of a probe, the patient was placed on the moveable platform as described before; his back was then struck by the hand; two or three efforts to cough followed, and presently the patient felt the coin quit the chest, striking almost immediately afterwards, against the incisor teeth of the upper jaw, and then dropping out of the month. No spasm of the muscles of the glottis took place; a small quantity of blood was ejected at the same time, apparently coming from the granulations of the external wound. From this date the patient proceeded rapidly to get well.

The author concluded by making observations on the following heads:—1st, on the influence of the size, weight, and form of a foreign body introduced into the windpipe, in modifying the symptoms; 2d, he referred to experiments which showed that a heavy body, like the coin in the present case, was most likely to drop into the right bronchus; 3d, he adverted to the want of success attending the use of the stethoscope in this and in some other cases of the same kind; 4th, he pointed out the reasons on which he had founded his opinion, that the artificial opening made in the trachea would prevent spasm in the glottis, and thereby give greater chance of success to the experiment of inverting the patient's body on the moveable platform; lastly, he dwelt on the difficulties and dangers attending the use of the forceps, when a weighty body is lodged deeply in one of the bronchi, as was the case in his patient.—*Bullit. Med. Sci.*, from *Med. Gaz.*, July, 1843.

Rosas' Operation for Cataract.—"Rosas is a dexterous and steady operator. In his extraction the patient is seated

on a low stool, with the head placed obliquely to the light, and resting against the breast of an assistant who raises the upper lid, while the operator depresses the lower with the middle and forefinger in the usual manner. He makes the downward section with a knife somewhat different from that of Beer, as originally used by him, and figured in his work in 1830. This knife is much shorter in the blade than Beer's, its posterior edge (or back) is also sharp and slightly convex. Holding it between the thumb, and the index and middle fingers, the ring finger bent unto the hollow of the hand, and the little one resting on the cheek bone, he introduces the point at a right angle with the cornea (to prevent its catching in its layers), a little above the transverse axis of the eye, and having entered the anterior chamber, he alters the position of the instrument by depressing its handle towards the temporal fossa, and thus brings the surface of the blade on the same plane with that of the iris. Having passed it rapidly through the chamber and made the counter punctuation, so that a full quarter of an inch of the point has passed through the inner margin of the cornea, he then *draws* it slowly downwards, and slightly outwards, and so completes the section. If the case is one of double cataract he makes the corneal section, and concludes the operation in the second eye before he extracts the lens of the first. He opens the capsule with a Langenbeck's needle, sharpened on its concave edge, and extracts the lens by gently pressing on the upper portion of the cornea with the flat of the needle.

"The object aimed at in having the back of the knife curved is, to give it shortness as well as breadth, and thus avoid pricking the side of the nose; and its posterior sharp edge is to permit of cutting upwards as well as downwards, and thus not only pass through the cornea with greater facility, but also enable the operator to extend the incision upwards if the original punctuation is too low. Another reason assigned by the inventor of this knife is, that its blade by being sharp at both sides, and forming in its section a compressed ellipse, permits less escape of the aqueous fluid in passing through the chamber, than the ordinary instrument.

"In this manner Rosas operates with the most marked success; but in other hands, especially beginners, his method and instruments are open to many objections. The insertion of the knife at right angles with the cornea, is very liable to transfix the iris, and by twisting the cornea itself, renders its further insertion less smooth and easy, and its cutting back endangers both sclerotic and iris, especially in turning its

lower edge outward when completing the incision; and when the iris happens to roll over the back of the knife, it cannot be pressed off with the same facility as when the posterior part is blunt; should the point of the knife get entangled in the iris, he withdraws it and re-introduces it in another place; if the corneal opening is too small he enlarges it with a Daviel's scissors.—*Wilde's Austria.—Bullet. Med. Sci.*

Researches on the Frequency of Cancer.—Dr. Tanchou presented to the French Academy of Sciences, at its session of the 3d of July, a very elaborate memoir on the Relative Frequency of Cancer.

The frequency of diseases, said Dr. T., is in direct ratio to the susceptibility of the organs which are affected by them. When this does not occur, it is to be attributed to some accidental circumstance. Cancer does not escape this general law. But what has not yet been investigated are the order and nature of the causes of this disease. Imagining that the effects of civilization might play no small part in the production of this affection, Dr. T. consulted, with the assistance of the Prefect of the Seine, Count Rambuteau, the civil registers of that Department. 1848 quires, forming the collection from 1830 to 1840, inclusive, 11 years, were examined.

It appears that in this lapse of time there died at Paris, and the districts of Sceaux and St. Denis, 382,851 persons. Of this number, 194,735 were men; and 158,116 were women. 9118 of these died of cancerous affections; of whom 2161 were males; 6957 were women. The excess of the latter was of course 4796.*

Deaths by Cancer.		Deaths by Cancer.	
In 1830,	668	In 1836,	837
1831,	865	1837,	778
1832,	814	1838,	803
1833,	814	1839,	887
1834,	857	1840,	889
1835,	906		
Total,			9118

That is, about 1.96 per cent. on the deaths of 1830, and 2.40 on those for 1840; which proves that cancer is on the increase.

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* Under the name of cancer, Dr. T. includes not only cancerous ulcers, but schirrus, carcinoma, osteo-sarcomas, encephaloid tumours, cancers of the skin, nose, lupus, sarcoceles—in a word, all local malignant affections.

In Paris, alone, during this time.

Deaths by Cancer.		Deaths by Cancer.	
In 1830,	595	In 1836,	728
1831,	756	1837,	674
1832,	712	1838,	703
1833,	721	1839,	779
1734,	752	1840,	779
1835,	800		
Total,			7999

That is to say, 2.54 per cent.; whilst in the arondissements of Sceaux and St. Denis united, there were:

In 1830, deaths	73	In 1836, deaths	109
1831,	100	1837,	104
1832,	102	1838,	100
1833,	93	1839,	108
1834,	105	1740,	110
1835,	106		
Total,			1119

Which gives 1.63 per cent. for the suburbs, whilst *intra muros* it was 2.54 per cent., showing that this disease is much more frequent in the capital than in its environs.

Considered with regard to age, he found the following results:

Age.	Deaths.	Men.	Women.
From 1 to 10 years,	23	9	14
10 to 20	26	13	13
20 to 30	231	62	169
30 to 40	1012	190	822
40 to 50	1975	339	1636
50 to 60	2108	488	1620
60 to 70	2067	598	1469
70 to 80	1315	398	917
80 to 90	335	62	273
90 to 100	26	4	22
Total,	9118	2163	6955

Examined in connection with the various organs affected, he found:

The Uterus,	2996	Shoulder,	4
The Stomach,	2303	Throat,	4
Female Mamma,	1147	Ear,	4
Liver,	578	Pharynx,	4

Rectum,	221	Forearm,	3
Abdomen, (?)	188	Kidneys,	3
Intestine,	146	Parotid Gland,	3
Bladder,	72	Tonsils,	3
Face,	71	Larynx,	3
Mesentery,	66	Palate,	3
Ovary,	64	Temple,	2
Tongue,	36	Chin,	2
Eye,	24	Back,	2
Jaw,	24	Pancreas,	2
Brain,	28	Iliac Fossa,	2
Testicle,	21	Cœcum,	2
Lips,	16	Vulva,	2
Vagina,	14	Umbilicus,	2
Spleen,	13	Haunch,	2
Anus,	13	Cranium,	1
Esophagus,	13	Cerebellum,	1
Neck,	13	Ethmoid Bone,	1
Cheek,	12	Orbit,	1
Nose,	11	Retina,	1
Mouth,	11	Mastoid Process,	1
Thigh,	10	Back of Neck,	1
Penis,	10	Sternum,	1
Leg,	9	Pleura,	1
Thorax,	8	Peritoneum,	1
Axilla,	8	Jejunum,	1
Thyroid Gland,	8	Ileum,	1
Scrotum,	7	Female Urethra,	1
Inguinal Region,	7	Perineum,	1
Lung,	7	Scapula,	1
Colon,	7	Bones of the Ilium,	1
Head,	6	Pelvis,	1
Heart,	6	Sacrum,	1
Arm,	6	Thigh,	1
Epiploon,	5	No organs designated,*	829
Prostate,	5		
Male Mamma,	5	Grand Total,	9118
Hand,	5		
Forehead,	4		

* Under this head those cases are included which were simply marked on the register as *cancer*. Dr. T. seems to think that cancer of the breast was meant in the majority of these cases; which, added to 1147 cases of schirrus of the female mamma, and 5 in the male, would give 1981 cancers of the breasts in the two sexes.

By this statement it will be seen that there is an increase in cancerous affections, and that they are much more frequent in cities than in the country. This has already been remarked in Berlin,* and in England.†

Dr. Tanchou gives the following cases for cancer of the uterus:

In 1830, 351 cancers of the uterus; 1831, 391; 1832, 396; 1833, 398; 1834, 436; 1835, 508.

Dr. Tanchou adds that a similar comparative tabular statement between the capitals and large cities, and the rural districts, is much to be desired.

Dr. T. states that cancer is a very ancient disease of civilized life. The first example is that of Mossa, daughter of Cyrus, and wife of Cambyses, B. C. 521. What is very extraordinary is, that, according to Herodotus and others, she was cured by Demeidus, a physician of Croton, without an operation.

It is said that cancers have been found among the mummies of Egypt; and Hamon, a very distinguished veterinary surgeon, who was fourteen years in the service of Mehemet Ali, never observed cancerous affections among the native female, but occasionally among the Turkish women. Dr. Clot-Bey has made the same remark. Cancer, according to Dr. T., is like insanity, much more common in civilized countries. It has been found that in the East it is much more common among the Christians than Mahomedans. Fabricius Hildanus believed that this disease occurred more frequently in temperate climates than in warm. Rouzet says that it is very rare in Africa. The result of Dr. T.'s researches on this point leave no doubt. Dr. Bac, surgeon to the second regiment of African Chasseurs, never saw a case, even at Senegal, where he practised six years. The medical officers of the French Army are agreed on this question. Baudens, the surgeon in chief of Val-de-Grace, who enjoyed a considerable practice at Algiers for eight years, saw only in that time two or three cases. Finally, Dr. Puzin, who, in 1835, established a civil hospital ten leagues beyond the French outposts, in the midst of the Arabs, did not see a case of genuine cancer out of 10,000 patients.

Dr. Tanchou discusses finally the treatment of cancer. Having examined this disease among animals, he gives some

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* Siebold's Journal, 1826.

† Cyclopedia of Surgery, art. Cancer.

interesting details relative to its frequency, according to age, sex, and the organ affected, He concludes thus:

1. The number of cancerous diseases seems to increase from year to year, and to be in direct ratio to the civilization of the country and of the people.

2. It is in old persons, and in women more particularly, that this malady is most to be feared. But early life is not exempt from it.

3. The organs that are most sensitive, and of glandular organization, are most obnoxious to it.

4. The cause of this disease would seem to exist in the whole economy, but more particularly in the fluids than in the solids.

5. When there is no external cause it would appear to result from a molecular organic modification, occasioned by various causes, but which, in the majority of cases, we may hope to destroy. (?)

6. In the present state of our science the treatment is only empirical, as in syphilis.

7. This treatment should include all therapeutic means, and should neither be exclusive, nor specific.

8. Finally, after twenty-two observations, which were presented to the Academy, and some scattered facts found in the science, it is not yet demonstrated that cancer is incurable in all cases. You can modify the affection, render chronic an acute case, dissipate, lessen, or render stationary the majority of primary engorgements. And it is to be hoped that we shall yet go further.—*Med. Examiner.*

Black Cataract.—At the Academy of Sciences, Paris, May 29, 1843, Magne forwarded the following case of this rare and curious disease:—

A female, above sixty years of aage, had labored under some affection of the eyes, for which she had consulted a great number of oculists. She was quite blind; the eyeballs were prominent; the sclerotica appeared to be thin; the iris well-shaped, but perfectly immoveable; bottom of the pupil dark, as in the healthy state.

From these and other symptoms, the disease was supposed to be amaurosis; but a second examination of the patient was made in a darkened chamber, and with the aid of a candle, as recommended by Sanson. The deep-seated images were absent, and the author accordingly declared the case to

be one of black cataract, with adhesion of the iris. The diagnosis having been confirmed by Cruveilhier, the lens on the right side was depressed, on the 25th of March, 1843. The adhesions of the iris were numerous; but as soon as the capsule was lacerated, the dark colour of the lens became evident, and, on depressing it, several black fragments were detached.

On the second day after the operation the pupil appeared to be less contracted, the base being quite dark, but on the following day it was closed by a white substance. Cruveilhier regarded this as the lens, which had come forwards, after having lost its dark colour in the vitreous humor. The operation was unsuccessful, and was, therefore, repeated in a fortnight; but the first touch of the needle showed that the body supposed to be the lens was, in reality, the capsule, which was extremely soft and elastic. A few shreds were removed with much difficulty, and the patient recovered but a very imperfect power of vision.—*Prov. Med. Journ.—Med. Examiner.*

New Limits for the period of Lactation.—Dr. Loudon, in a recently published work on population, has named the period of three years as that during which the infant should receive its nourishment by lactation. His argument is the following: "Of all mammiferæ, none is so long as man in being able to sustain itself upon its legs, in reaching the age of puberty and adult age, and, taking his size into consideration, none is endowed with a longevity comparable with his. Man is completely developed at 21; few men have lived till 150. Now, if we divide the first number by 7, and the second by 49, we shall find that the period of lactation for the human race ought to be three years."—*Med. Examiner*, from *Provin. Med. Journ.*, June 34, 1843.

Diagnostic Sign of Dislocation of the Thigh-Bone into the Ischiatic Notch.—Mr. Syme has recently narrated, in the "London and Edinburgh Monthly Journal," a case where the occurrence of the dislocation was determined by the presence of a particular sign, which appears to be of much importance in the diagnosis of a dislocation which Sir Astley Cooper has

described as "the most difficult both to detect and reduce." There is less deformity and fixture of the limb than in any other of the displacements of the thigh-bone. "This obscurity (says Mr. Syme) is much increased by attempts to effect reduction, since a moderate degree of extension almost entirely removes the shortening and inversion, which are usually considered the most characteristic symptoms. I think it, therefore, of consequence to state, that there is another feature of the injury which, according to my experience, is never absent—always well marked—and not met with in any other injury of the hip-joint, whether dislocation, fracture, or bruise. This is an arched form of the lumbar part of the spine, which cannot be straightened so long as the thigh is straight, or in a line with the patient's trunk. When the limb is raised or bent upwards upon the pelvis, the back rests flat upon the bed; but so soon as the limb is allowed to descend, the back becomes arched as before. By attention to this symptom, I have been enabled to recognise the existence of dislocation into the ischiatic notch, when it had been unnoticed by others; and, on one occasion, when it was supposed that the replacement had been effected through powerful extension by the pulleys."—*Ibid.*

Quinine in Traumatic Fever.—A case has lately occurred in the Hôpital des Enfans at Paris, in which Guersant has employed, with entire success, the sulphate of quinine in the treatment after amputation of both lower extremities. The patient, a poor boy, whose limbs had been frozen by exposure during a winter's night, and afterwards most injudiciously bathed in hot water, was brought to the hospital, the limb exhibiting a discolored spotty appearance, and other symptoms of incipient gangrene. This condition in six days, notwithstanding the application of bark-poultices and bottles of hot water to the extremities, so greatly increased as to render necessary an immediate amputation of both legs. The operation was successfully performed, and with little suffering to the patient, who gradually recovered, though not without indications of considerable fever and erysipelatous inflammation, both of which were subdued by doses of sulphate of quinine, amounting to twelve grains in a day. Guersant cites other cases, also, in which he has employed the same medicine with success, in all of which the leading feature was purulent reabsorption.—*London Lancet*, from *Gazette des Hôpitaux.*

Wenzel the Oculist.—A lady attached to the court of the empress, becoming blind, was pronounced amaurotic by the medical man called in; her malady continuing to increase, the Baron Wenzel was sent for, and he at once declared it to be cataract, and operated on it with success. So amazed was Maria Theresa at this display of Austrian surgery, that she forthwith established a special lectureship of opthalmology, and Barth was the first that filled the chair in 1773; and in 1776 he was appointed oculist to Joseph II. He was a most expert extractor, and there are still several who have witnessed his operations—the invention and use of Beer's knife (that now so generally adopted) is in a great measure due to him, for although his was longer in the blade, and somewhat broader towards the handle, yet it was upon an enlarged scale the same. The objections urged against it, of pricking the nose from the great length of its point, and not cutting itself out (as it is termed) with facility, is now obviated in that introduced by his pupil, Beer. His mode of operating was remarkable; he did not require an assistant, (and was, perhaps, the first oculist who did not), but placing the patient standing in the corner of the room near a window, he opened the lids, and fixing the eye with one hand, he passed his knife through the cornea with the other, as is now so dexterously performed by Mr. Alexander; but, different from that very distinguished oculist, he stood before his patient. It is needless to add that he was ambidexter. He died in 1818; his portrait bespeaks him a man of noble and prepossessing appearance, and his ad captandum, but engaging manner and address, added to his acknowledged talents, procured him many admirers.—*Medical Examiner*, from *Wilde's Austria.*

Moveable Kidney.—In the "Medical and Physical Journal" for 1825, (vol. ii., p. 476) mention was made of certain cases of equivocal moveable tumours in the abdomen which had been taken for diseased ovary, but which Dr. Bailie suspected were due to an abnormal state of the kidney. He had not opportunities of verifying his suspicions by postmortem examination, but the correctness of his diagnosis has since been amply confirmed.

In 1826, Aberle published in the "Salzburg Gazette," a case of a man, thirty-six years of age, who, having long suffered disturbance of the digestive organs, began to remark a moveable tumour to the right of the umbilical region, which he could with ease remove so as to press against different parts

of the abdominal parietes. The tumour gradually increased, the patient fell into a state of marasmus, and ultimately died. After death the spleen was found tuberculous; the pancreas hypertrophied; the right kidney healthy, but moveable, and capable of displacement with great facility, its vessels having become much lengthened, and its cellular envelope destitute of fat.

Since the above period Aberle has witnessed and recorded three other and similar cases. One occurred in a woman, sixty-six years of age, who had died of apoplexy, and on opening whom a solid mass was found on the right side in front of the psoas muscle, which turned out to be the kidney, pushing downwards the ascending and part of the transverse colon. The second case was that of a lady, seventy-five years old, who had long perceived the presence of the tumour, which became more moveable after a sharp attack of dysentery. She, however, suffered little or nothing from it beyond some pain after fatiguing walks. The third case occurred after menstrual disorder; but the patient suffered little material inconvenience. In The Lancet, Jan. 21st, 1837, (p. 587) an analogous case is reported by Mr. King. It is remarkable that in all these cases the anomaly has occurred on the right side, and mostly in women.—*London Lancet*, July 15, from *Schmidt's Jahrbuch*, vol. xxxvii., p. 312.

On Lateral Curvature of the Spine.—By James Syme, Esq., Professor of Clinical Surgery in the University, Edinburgh.—[The object of this paper of Mr. Syme's is to point out the kind of case in which an operation for spinal curvature may be useful, and to discourage the operations which are recommended for all other kinds of spinal distortion. We cannot always be sure whether the bones or muscles are the first cause of lateral curvature. The muscles may be so weak as to allow the spine to bend, and the bones may at the same time be so unhealthy that an undue pressure may cause a premature distortion. All the operations which have been recommended for these lateral curvatures are at least very doubtful in their efficacy, if not positively injurious, and there is only one kind of spinal distortion which it is proper to attempt to remedy by subcutaneous incisions, and that is spinal curvature depending upon wry-neck caused by contraction of the sterno-mastoid, which muscle is liable to contraction both spasmodic and permanent. Although spasmodic contraction

does not generally affect the shape of the spine, the permanent contraction may do so very materially.]

Wry-neck, like club-foot, is sometimes congenital, but much more frequently, like squinting, and the *pes equinus*, occurs during childhood, in connexion with some inflammatory or feverish state of the system. It depends upon a contracted state of the sterno-mastoid muscle, which has usually the feeling and appearance of a tense cord stretching from the clavicle to the ear. The head is bent towards the side affected, the face being turned to the opposite direction. Until the introduction of a subcutaneous incision, the treatment of this complaint was very defective, since it consisted either in the use of mechanical support, which did little, if any good, or in cutting across the contracted muscle, together with its superjacent integuments, which was a painful and bloody operation, leaving a large sore, slow to heal, and apt to renew the evil during cicatrization. The subcutaneous process requires merely a puncture of the skin, is not attended with pain or bleeding, needs no dressing or after-treatment, and at once affords the relief desired. The following is the first case on record of its performance in Great Britain, which I extract from my tenth report of the Edinburgh Surgical Hospital.

"*Wry-Neck depending on Contraction of the Sterno-Mastoid remedied by Division of the Muscle.*—Matthew Cullen, aged six, Dunbar, admitted November 2, 1832. The head was much inclined to the left side, and could not be elevated, owing to the rigid contraction of the left sterno-mastoid, the sternal part of which felt like a tense cord. The complaint had existed upwards of twelve months, and had resisted blisters, with other similar means of remedy. In these circumstances, it was thought necessary to divide the contracted part of the muscle. This was effected by entering a sharp-pointed narrow knife a little to the inner side of its tracheal margin, about an inch above the clavicle and then pressing the blade against the tense fibres. A sudden snap, which shook the patient's frame, was immediately perceived, and all trace of the contraction disappeared. The knife was withdrawn, and the small puncture occasioned by it in passing through the skin afforded the only perceptible indication of what had been done. No pain or other bad consequences followed, and the cure might be regarded as at once complete."—*Ed. Med. and Surg. Jour., p.* 115.

In the case just related, the disease existed in its simplest form, and without any affection of the spine, which is seldom wanting. It proceeds from involuntary elevation of the

shoulder on the side affected, to lessen the strain on the head. This necessarily gives the dorsal part of the spine a corresponding convexity; and the lumbar portion bending in an opposite direction, to preserve the balance of the trunk, there results a lateral curvature, in no respect different, so far as regards appearance, from its ordinary condition. I was asked, along with Sir Charles Bell, to see a young gentleman suffering from lateral curvature. Finding the right sterno-mastoid very much contracted, I proposed to divide it, and did so with the effect of redressing the spine immediately, so that before we left the house the youth was walking straight.

But if the distortion be permitted to continue, it sooner or later, as in the ordinary form of the disease, leads to alteration in the shape of the bones. The bodies of the vertebræ are compressed, and the sternum projects. In this case, of course, the operation cannot afford the same instant relief that follows its performance while the curvature depends merely upon muscular action. The head, however, is at once set free, to the patient's great comfort; and through the gradual improvement of time, the trunk, unless arrived at full maturity, may in a great measure regain its proper conformation. A few weeks ago, I saw, with Mr. Cruickshank, of Hill Place, a young lady from this neighborhood, on whom I performed the operation in January, 1841. The back and ribs were then so much distorted, that I hardly ventured to hope for much improvement, especially as the patient was nearly twenty years of age. It was therefore an agreeable surprise to find, instead of the low, thin, sallow, crooked, sickly-looking girl I had formerly seen, an erect, fresh-colored, happy, healthy-looking young woman.

There is still another condition of the complaint, of which I may mention an instance that came within my notice last summer, in the case of a boy who was brought from the country on account of lateral curvature. Observing that his head inclined to one side, I examined the sterno-mastoid, and found it, not tense and rigid as I expected, but soft and yielding. I perceived, however, that when an attempt was made to raise the head, the muscle resisted and became tense, and therefore concluded that it was the seat of the evil. Under this impression I proceeded to divide it, and succeeded in doing so, though with more difficulty than usual, from the want of tension, for which it was necessary to compensate by stretching the neck. A good effect was immediately perceptible, and the following day the patient's back was compara-

tively straight, which it has since, I am informed, become completely.

In concluding these remarks, it may be well to warn against mistaking for wry-neck depending upon muscular contraction, the distorted position of the head which proceeds from caries between the occiput and atlas. The latter disease, like the former, usually occurs in young persons, presents to a careless observer similar symptoms, and if confounded with it, leads to treatment not only useless, but extremely injurious. A young gentleman had for twelve months used friction and exercise under the instruction of a distinguished member of the profession, who supposed that he labored under wry-neck from contraction of the sterno-mastoid. No benefit having been experienced, it was thought that an operation might be serviceable, and with this view I was asked to see the patient. He presented all the characters and well marked symptoms of *spondylarthrocace*, or caries at the occipito-vertebral articulation, in a stage so advanced, that there was nothing left for me but to explain the nature of the case and predict the fatal termination, which soon afterwards happened.—*Braithwaite's Retrospect of Med. and Surg.*, from *Lond. and Edin. Monthly Jour. Med. Sci.*, April 1843, p. 271.

Van Arsdale on Obstetrical Auscultation.—The foregoing observations on the nature and value of the pulsations of the fœtal heart, seem to establish the following propositions:

1. These pulsations are a certain sign of the existence of pregnancy and of life in the fœtus.

2. The impressions upon, and the variations in, the circulation of the mother, have no effect on that of the child.

3. The *increase* in the number of the double pulsations is of little consequence, since it rarely happens and is usually of short duration. On the other hand, a *decrease* in the number, during parturition, and especially in a protracted labor, announces danger to the child, and indicates that the labor should be terminated by instruments, by version, or such other means as the case may demand.

4. We should not expect to discover these pulsations before the completion of the first half of pregnancy. The average number of beats is 135 a minute, and they continue to increase in intensity from the moment when first heard until parturition.

5. Cases of double pregnancy may be diagnosed from hear-

ing the pulsations of two distinct fœtal hearts, and these pulsations usually differ in number from 8 to 15.

6. The detection of these beatings is of the first importance in cases of extra-uterine pregnancy, since, if they were not discovered, the case might be mistaken for a fibrous tumor of the ovaries or a simple cyst, and be treated as such.

7. They are discovered at a point corresponding with the dorsal præcordial region of the fœtus.

8. To discover the presentation, we have to draw an imaginary *horizontal* line, dividing the uterus into two equal parts. When the head presents, the pulsations are heard in the inferior half, and when the pelvis presents, they are heard in the superior half.

9. To discover the position, we have to draw an ideal *perpendicular* line, bisecting the preceding one. When the back of the child is turned towards the right side, the pulsations are heard in the right half; and when turned to the left, they will be heard in the left half.

Lastly, the entire absence of these pulsations should invariably deter us from performing the Cæsarean operation, or from making a division of the symphysis pubis; in a word, from doing anything which might prove injurious to the mother, in the vain hope of aiding the child, which we are now bound to believe to be no longer alive.—*New York Jour. of Med.*, September, 1843.

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HEALTH OF THE SOUTH.

The public prints inform us that there is a good deal of sickness in some of the Southern States. The yellow-fever prevails in New Orleans, though not in so severe a form, nor so generally as it has in preceding years. At the last dates, however, it was on the increase, and the papers warn the unacclimated to keep away. The country parishes, meantime, are suffering very considerably with bilious fever of a very severe and fatal character. On some of the plantations the distress is said to be extreme.

In Mobile, also, the yellow fever is present, and is of a malignant character.

Vicksburg is represented to be more than usually healthy.

Rodney is suffering greatly. The disease is regarded as a malignant form of bilious fever. Death ensues about the fifth day. C.

PENNSYLVANIA MEDICAL COLLEGE, PHILADELPHIA.

Difficulties, it is said, have occurred among the Faculty of this College, in consequence of which they have resigned. It is not

known whether the school will be re-organized or not; but at such a period of the year it is improbable that any arrangement can be made to insure a course of lectures the coming winter. The Faculty embraced some distinguished men.

What the poet says of human affairs generally, is particularly applicable to things medical and at the same time collegiate:

"Naught may endure but Mutability."

C.

SMITH'S MINOR SURGERY.

This is a volume of three hundred and three pages 12mo., and is divided into four parts: Part I, treats of the preparation and application of dressings; Part II, of the application of the bandage, simple and compound; Part III, of the apparatus for fractures and dislocations; and Part IV, of minor surgical operations. Under Part II, Dr. Smith introduces the Handkerchief system of Mayor; we do not observe that the volume has any other claim to preference over those already in use, notwithstanding it is endorsed by many of our eastern *confreres*. The part devoted to Minor Surgical Operations is meagre indeed—and might just as well have been omitted. The author acknowledges his draughts upon the treatises of Velpeau, Gerdy, and Mayor; he might have added Cutler, as many of the illustrations of the volume will appear marvellously familiar to one acquainted with Cutler's treatise, issued in similar form by the same publishers.

Touching the subject of Surgical Operations, we would say that we know of no work equal to Tavernier's Operative Surgery, translated by Professor Gross. This is now out of print, at least we have never been able to get a copy of it; and we think it would be doing the profession a service, if some publishing house, Messrs. Barrington and Haswell, for instance, would put forth a second edition. We are confident it would repay them. C.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY

NOVEMBER, 1843.

ART. I.—*An Account of the Fever which occurred among the Theological Students of Lane Seminary, during the fall of* 1842, *and the ensuing winter.* By THOMAS CARROLL, M.D., of Cincinnati.

Before entering on the particular consideration of the fever which is the principal object of this paper, I shall make some observations about the locality in which the Lane Seminary is situated; and the mode of living adopted by the students, &c.

This institution is situated a mile and a half from the eastern border of Cincinnati, on a plateau elevated five hundred feet above the Ohio. This plateau stretches and gradually descends several miles to the eastward, where it meets the Little Miami river; on the south it is bordered by the

Ohio, and on the north-west by Mill-Creek. Towards the river it breaks into steep declivities; but in other directions, the descent is more gradual. Towards Mill-Creek it is broken into steep declivities or gently sloping hills. The geological formation from the river to the summit of the hills, is mostly of transition limestone, alternated with thin beds of shale; these are, however, so thin that they should be denominated seams. Water is obtained by digging to the depth of about thirty feet; but few wells, however, yield an abundant supply. Springs are occasionally met with, yielding reasonable supplies of good water. Currents of air which play over the surface must of necessity be pure, as the elevation insures an exemption from fogs or humidity.

It would seem from the foregoing considerations, that the location of the Seminary would insure as complete an exemption from disease, as that of any other; and, that no situation in the Mississippi Valley could offer a better prospect for health than it does. Indeed, if the experience obtained during the last forty years may be allowed to decide, there can be but little doubt of the truth of the proposition.

The habits of the students at the Lane Seminary, have probably differed but little from those of young men at other, or similar institutions. Their rooms are in a house which stands in an exposed situation, and is four stories high—has a large number of rooms, each of which is eleven or twelve feet long, and eight wide, lighted by one window, with the exception of those at the angles of the building, which have two, each. These rooms are warmed by open stoves, heated by wood. It has been the habit of the students to take care of their own rooms, which of course has not always been done in a way that a lady would have dictated. Most of them have lived at a common table, which has been furnished in a plain but substantial manner. Six or seven, however, boarded themselves during 1842, and most of these were Grahamites; indeed, all lived in an abstemious way. All with a single exception had the fever—he, I believe, ate animal food occasionally, and he was also too far advanced in life to be in much danger of the

disease. Among these students arose the worst forms of the fever. But one student who had the disease boarded in a private family, and the form in which he had it was not severe. Six cases occurred in families who had admitted some of the sick students. There were two cases in the Rev. Mr. Goodman's family; these occurred in boys who, so far as was known, had not mixed with any of those who had the disease at the Seminary. All who had the fever, besides the students, were under thirteen years of age; and one was not more than two years old.

That there has existed in the Mississippi Valley, during many years, a fever whose characteristics have been different from the intermitting, remitting, synocha or synochus, is, I think, capable of the clearest demonstration. In an essay published in this Journal, in 1842, (Vid. *Western Journal*, vol. v., p. 20,) I described this fever as one of a continued type; and contented myself with detailing some of the leading features belonging to it, with the nature of the localities in which I had observed it. Names in the West, as well as in other places, have had too much influence in dictating the treatment of disease, and particularly of fevers that have had the fortune of being called typhus; I was, therefore, unwilling to misguide my readers by endeavoring to distinguish it by any other name, than that of continued; though, as will be seen, there can scarcely be a doubt, that it is identical with the New England typhus of Nathan Smith, or that called typhoid by more recent writers.

The first evidences of fever at Lane Seminary, were evinced in a young gentleman who had spent a few months in northern Indiana; and who was taken ill soon after his return, which was in September. His fever did not, in the opinion of Dr. Dodge, appear to be of the same kind as that which was afterwards developed among the students; he thinks it was a case of remitting fever, combined with dysentery. The next case was that of Mr. Hicks, who had been travelling in Illinois for some time, and had been at home about a week before he was attacked. A short time before

his return he had been sick, but had recovered. He was attacked early in September, and was not well on the last of November. Dr. Dodge, who attended him, was first under the impression that he had nothing but a mild form of remitting fever; but the long continuance of the fever, and the symptoms attending the last stage, caused him to class it with those that followed. On the first of November another case occurred; on the fourth two more; and from that time until the twenty-seventh December, but few days passed without a new case. The number affected was thirty-two; twenty-four students and eight children.

At first, most of the cases began with slight indispositon, which generally continued but a few days; head-ache was a frequent symptom, and lasted for two or three days more; and then a chill of some hours duration completed the formation of the fever. During the whole forming stage, slight chilliness was experienced particularly at the approach of night. The skin was mostly dry, though there was in a few cases partial sweating, which generally occurred at night. This condition of the surface, however, did not last long; it became dry, and yielded to the touch that peculiar sensation which so generally belongs to typhoid fevers. The pulse was quickened and more resisting than natural, and there was occasionally slight nervous disturbance that sometimes continued either in an undiminished, or aggravated form, throughout the disease. The fever might now be said to be completely formed, and continued a longer or shorter time according to circumstances. A few recovered completely in two weeks, while others were down from twenty days to three months. Most of the patients were convalescent in twenty-eight days. Through the first ten days, the tongue was mostly slimy and covered with a white fur, which after some time became brown on the centre and back part. In a few cases the organ had a chapped appearance; in two or three only was it red; and in two cases dryness supervened. One or both of these conditions was present in two cases that proved fatal.

The urine in most cases was scanty and high colored, and in a few was voided with difficulty towards the termination of the disease. The face was frequently flushed, but sometimes little alteration could be observed; this symptom was however more frequent during the advanced stages, or after the first ten days. It often appeared day after day on but one cheek, and in the afternoon. It mostly preceded sweating a few days, but when this supervened, it subsided for some hours, and reappeared on the following afternoon. The pulse generally exceeded its natural frequency from ten to twenty strokes per minute. In some of the adults it was one hundred and forty, and in children occasionally more. It was generally regular, full, and round, without much tension; in a few cases it was irregular, vibratory, tense, and sometimes feeble, though mostly resisting. In two of the fatal cases, the pulse was regular, round, and not hard until near the last. The hearing was affected in but few patients; in three of the fatal cases it was imperfect. Towards the termination of the fever sweating was frequent, though not universal, and had generally the effect of mitigating the fever; indeed, in many cases, it seemed to be the mode by which the disease left the system.

The understanding remained clear for the most part; yet there were six patients in whom delirium supervened at some period of the fever. Slight wandering occurred in others, and was present in a greater or less degree, in all the cases that terminated fatally, though not through the whole course of the disease.

Sudamina appeared in six patients only, and in but one of those that terminated fatally; but the lenticular spots, considered essential to the typhoid fever of Louis, Chomel, Bartlett, and others, appeared in a well marked form in but two cases. Both of these were children, one eight, the other four years of age. It is true, that there was in a few cases an eruption, but it was not of the kind that is considered essential to typhoid fever.

There was either diarrhœa, or very easily excited bowels,

in a large number of cases; indeed there were but few exceptions. The discharges per anum were generally of good color, but not consistent; and hæmorrhage, so much to be dreaded, occurred in two cases only, which will be noticed by and by. Meteorism, and gurgling on pressure, were present in most of the cases; the former, in particular, to a greater or less extent in nearly all. This condition is not always brought about by unassisted morbid action, but, in my humble opinion, by the mode of treatment, both as regards medicine and diet. Soreness and pressure over the region of the ileo-cœcal valve, could be discovered in most cases; and sometimes there was diffused tenderness over every part of the abdomen, though this symptom was by no means common. In a few patients there was irritation of the stomach, and medicine was retained with difficulty: this organ, however, mostly bore with ease whatever was taken. Most of the patients had considerable thirst, and desired cold drinks. Abdominal pains were not unfrequently present, and in a few cases were severe; bleeding from the nose was not an uncommon occurrence towards the close of the fever.

With these general observations, I shall proceed to detail the mode of treatment adopted in the management of this disease. So various have been the methods pursued by different practitioners in the treatment of what is called typhus fever, that he who prescribes for it must render himself obnoxious to the censure of those who have adopted the different views of different authors, or practitioners; this will not, however, deter me from being careful in detailing the method pursued in the treatment of the disease under consideration.

I did not see any of the cases until the 25th November; after that period, I attended all of them in conjunction with Dr. Dodge, until the 27th January, when the Dr. was seized with the same disease. I then attended alone until it disappeared in his case, about the first of April. Anterior to the time I was called, Dr. D. had attended all the cases, but occasionally had the advice of Drs. Mussey and Worcester.

Dr. Dodge and myself usually made alternate visits, and compared notes every evening, so that the treatment was conducted with a perfect understanding of what each had done; thus a very steady course was pursued throughout.

One of our first objects was to see that the patients had apartments sufficiently large and well ventilated; and that their bed and body linen should be frequently changed. In accomplishing these objects we experienced but little difficulty, as a number of those who fell sick were kindly invited to the houses of the professors, or wealthy neighbors, where every friendly office was promptly and cheerfully performed. Those students who were not sick became nurses in turn, so that proper attention was paid, both by day and night. It may be added, that as all the adult patients had well cultivated minds, and had arrived at definite conclusions as to the prospects of a future state, calmness, without unnecessary despondency, was manifested in every case, so far as I know.

When at the outset we found our patient with a strong, hard, and frequent pulse, or indeed when the frequency was but little if any above the natural standard, with accompanying head-ache, and flushed face, we bled to approaching syncope; immediately after, the warm dash was used, or sometimes warm sponging, and in a few cases the cold dash was administered either over the whole surface, or on the head alone. The next object was to purge freely by giving from ten to fifteen grains of calomel, and following it in half an hour or more with a free dose of salts, jalap, or oil. I was, myself, favorable to the use of jalap, and therefore gave it, in preference to the other articles. After thus reducing the system, it was agreed to direct the warm shower or sponging every few hours during the first several days; and afterwards less frequently. I felt anxious that all the patients should take tartrate of antimony in minute doses, throughout the disease, until the approach of convalescence or sinking; if these irritated the bowels or stomach, opiates were to be added, or used to prevent it; and in those cases

in which the diarrhœa was difficult to control, the antimony was to be discontinued. Occasional small doses of calomel were thought proper; where there was irritation of the bowels the blue pill was substituted in its stead.

In prescribing mercurials it was not our object to affect the salivary glands, though a gentle action we did not fear; we had little or no confidence in its removing the fever, however much it might mitigate the symptoms. When diarrhœa should appear, it was our purpose to allay it by Dover's powder, soda, &c. Aperients were to be used when admissible, but no active purging should be induced after the first few days of the fever; one, two, or three evacuations daily, it was thought would be sufficient. My own predilections led me to favor the use of jalap, or epsom salts for this purpose. Dr. Dodge preferred salts, while Professor Mussey had a very decided opinion in favor of rhubarb and soda combined; in cases of debility this combination had a good effect. Often no cathartic medicine was administered for days in succession. Emetics we occasionally tried, and found them beneficial in several cases; in one, however, vomiting had an unfavorable effect. Probably no certain rule can be laid down to govern the use of emetics in fever; and in those of a remitting or intermitting type, they not unfrequently seem to act disadvantageously; in continued fevers, however, they operate with more advantage.

When the abdomen was in a meteoric state, with or without tenderness, or the bowels painful, fomentations of various kinds were prescribed, with dry-cupping, blistering, &c.; scarifications with cupping, were resorted to in a few cases. For pain in the head, or more serious affection of it, cold applications to the scalp with blistering, &c., were resorted to; the latter was of much service, the former more problematical. It may be proper to observe that in cases where bleeding was resorted to more than once, the patients were not benefited by the second operation; indeed I am opposed to bleeding after the first week, except in a few rare cases. I do not recollect that I have ever known a patient to recover,

who was largely bled at a late period. Whatever brings the pulse below the natural standard in point of strength, has had, so far as I have observed, an unfavorable effect. At the outset we concluded it was only proper to moderate the force of the morbid action, rather than to attempt to cut it short; as we considered the disease in a great measure of a self-determined character.

It will be admitted that in a disease where there exists local lesions likely to destroy life, and where the accompanying fever is of a high grade, whatever would lessen its force would benefit, or prevent the progress of those lesions; and by this means enable the system to overcome the fatal tendency that otherwise would attend such lesions. Hence the benefit of moderating the force of the circulation in this fever. Advantage would then be derived from various means, as bloodletting, laxatives, diaphoretics, &c. But of all the means within the reach of the profession none seems to me equal to the tartrate of antimony, when given in such way that the stomach shall not be much disturbed by it, yet that the circulation shall be brought under its control, which will be known by the pulse becoming less frequent, less hard, and less constricted, or more natural in its action. Small doses will, when continued during several days, gradually bring the action of the heart and arteries under its influence, so that the frequency of the pulse will be lessened two strokes or more per minute, at the same time that all the other symptoms will be mitigated—the skin will be more natural, the heat more regularly diffused, head-ache, if it exist, will be moderated, and the various secretions more normal.

Not a few authors and distinguished professional men have given their opinion in favor of the use of antimony in continued fevers. I am happy to say that among these are Professors Drake and Dudley.

The following cases will illustrate my views with regard to the use of this medicine in the treatment of the fever un-

der consideration; and of the advantage that may be derived from bloodletting under certain circumstances.

Mr. Hildreth, son of the distinguished S. P. Hildreth, M. D., of Marietta, was taken sick on the 4th November; was chilly for three days anterior to confinement to his room. At the close of this period the fever was completely developed. There was head-ache, thirst, a dry skin, and restlessness. To relieve these symptoms, he took six grains calomel, six of aloes, and six of rhubarb, which acted well; on the following day, I believe, he took by the advice of Dr. Worcester, five grains blue-mass, and some castor-oil, which also acted. The fever, however, continued, with intense head-ache; this the patient thought could be relieved by bleeding, and he got one of the students, who was a physician, to open a vein; thirty oz. were drawn by which he experienced immediate relief. Before being bled he had occasionally used cold applications to his head; during the time of their application, there was no pain, but he had oppression of the chest with pain and difficulty of breathing, which was relieved by the removal of the cold from the head, when the pain became re-established in that part One or more other cases, as will be seen, were affected in the same way, by the same treatment.

For some time he took a combination of spirit. nitr. dul. with occasional doses of rhubarb and blue-pill. I first saw this patient on the 25th November; his pulse was then one hundred per minute; his fever constant, and skin dry and hot. He had sudamina in great numbers about the chest. One-tenth grain of tartar-emetic, was ordered every four hours, with occasional doses of rhubarb, and five grains of the blue-mass every other night, or even more seldom than that. He was directed the warm shower every four hours, or when the shower was not convenient, sponging was admitted. After this course was instituted, the pulse but seldom exceeded ninety beats per minute. The cause of this alteration I ascribe to the influence of the antimony in a great measure, though the external use of water had no doubt a happy effect.

Mr. Tyson, aged about twenty-five years, was seized with head-ache, which occasionally remitted. It was mostly in the back part of the head, and was accompanied with some degree of stupor; slight chilly sensations were also complained of. On the fourth day of his illness I found him with intense head-ache, and a strong pulse, ninety per minute. The tongue was loaded with a white fur; yet he complained but little of his stomach or bowels; he, however, had considerable thirst. As this gentleman was naturally robust, I concluded that an active plan of treatment would be the best; I therefore bled him to the fainting point. After this I fixed his head over the edge of the bed and separated his hair so that the scalp could be easily reached by water, one gallon of which was slowly poured from some height on his head. I directed that if head-ache returned it should be repeated; this was, however, unnecessary, as there was no recurrence. Very soon after bleeding, fifteen grains of calomel, and thirty of jalap were given, which acted freely. At my next visit I found my patient sitting up and with very little fever. I directed him to abstain from bodily or mental exercise, to live on bread and water for some days, and occasionally to take laxative doses of salts. His fever altogether subsided at the end of ten days from the first evidence of disease.

Mr. Kinney, of about the same age as Mr. Tyson, and with a fine constitution, was taken very nearly in the same way. He had been sick three days before I saw him. I directed the shower bath, and prescribed fifteen grains of calomel, and thirty of jalap. After the cathartic had operated, he was bled, agreeably to my instructions in case head-ache supervened. By this course the patient was relieved of all unfavorable symptoms in a few days.

Mr. Ford, a young man of great physical power, and of regular habits, was attacked in nearly the same way as the last two gentlemen. I first drew thirty ounces of blood, and directed an active cathartic of calomel and jalap, with an occasional warm shower, one however, was directed immediately after the bleeding. This course so effectually subdued

the fever at the outset, that it never returned with any violence. He took during a week or more the tenth of a grain of tartrate of antimony every four hours. In a short time after the beginning of the treatment, sweating commenced, mostly at night, and within a few days seemed to carry off the fever.

It is now my melancholy task to lay before the reader an account of a few of the cases in which bleeding was either not resorted to at all, or at a late period. I shall confine myself to the description of five cases, four of which terminated fatally, the remaining one recovered with much difficulty.

Mr. Olney was taken sick on the 1st December. His health had been good, and he was among the most successful students of the Seminary. His diet had been for months exclusively vegetable, or nearly so—though so far as I know, no evidence of debility had been observed as induced by his mode of living. For some time before he was taken, he had occasionally watched with Kidder, whose case will be noticed by and by; but I believe he had not been much exhausted from that cause. Before he was confined to his room he had been unwell during several days. His head had ached, and he had felt indisposed to action. Some hours before I saw him, he had become chilly, and the pain of the head had increased—his skin had become more dry, and his hearing, which had hitherto been but slightly affected, had now become much impaired. When I saw him he complained of noise in the head, with considerable difficulty of breathing. His face was flushed and hotter than other parts of the body. The pulse was one hundred and twenty, full and hard, generally regular, but when he moved it became quicker and less harmonious. He had but little pain, save in his head, though his bowels were not altogether easy, as he complained of fulness and slight soreness on pressure. His tongue was covered with a white fur, but was not dry. Viewing the case as one fraught with great danger, I proposed bleeding, although, as yet, none of the patients had been bled; my patient would

however, not submit to the operation. This opposition grew out of a predilection that he had for the "steam system" of practice; and on similar grounds he would not take calomel. Under these circumstances I probably ought not to have made any prescription; yet the anxiety felt to save the life of a promising young man, overcame my professional pride. I directed a cold shower every eight hours, with salts, and minute doses of antimony. The cold water gave him considerable relief, after each application, during the first two or three days, but ceased to have much influence afterwards. Dr. Worcester saw the patient on the following day, and made no other prescription; on the ensuing day Dr. Dodge saw him, and found his head still much affected; delirium had supervened some hours before his visit; he opened the temporal artery and drew a considerable amount of blood, which for a few hours seemed to render the patient more calm. This condition gave way to delirium, &c. I again saw the patient at the end of seventy-two hours from my first visit. I found him sitting up in bed, and wanting to get out; his eye was wild and watery; his countenance sunk, and rather pale, with much subsultus. This last symptom had been present from an early period, as I observed slight twitchings of the tendons when I first saw him. There was also at this time sudamina over the neck and chest, but no lenticular spots. Diarrhœa was now established, and there was fulness of the abdomen; but from the condition of his mind I could not determine as to its tenderness. Combined with these symptoms was constant watching, which, indeed, had existed from the first. Dr. Dodge, on the preceding day, had given one or two ten-grain doses of calomel, which had operated. I directed a repetition, with a blister to the head, which was, however, not applied until the following evening. I did not again see him until forty-eight hours had elapsed. Dr. Dodge in the mean time visited him, and had directed more calomel in doses of ten-grains, which he took. The symptoms had all been getting worse; he was lying in a constant state of irritation, or motion from nervous disturbance. His

tongue was tremulous, chapped, and brown, and his breathing difficult, &c. At 9 o'clock of the same evening he expired.

Nineteen hours after death, Dr. Dodge and myself proceeded to examine the body. It had been my opinion from the beginning, that the brain was deeply implicated, and that it had continued in a diseased condition (or at least its membranes) until death. I had indeed given it as my opinion that the direct cause of death lay in the brain. Dr. Dodge, however, was inclined to think that the lesions of typhoid, as described by Louis, had caused a fatal termination. Under these impressions we began the dissection.

The tunica arachnoidea was adherent to the pia-mater throughout, and opake to a considerable extent. The pia-mater was vascular beyond what is usual; and the brain being cut into, exhibited red points through its substance; there was, however, but little effusion. These appearances satisfied me of the sudden termination of the case in death; my friend, however, had his attention fixed on the abdomen as the seat of the leading cause. We found the stomach but little altered, nor did we find much, if any, disease, along the line of the upper bowels, until we arrived within six inches of the ileo-cæcal valve. From this point until we reached the cæcum, we found an unusual number of elliptical plates, and they presented the following appearances: The edges were raised above the surrounding mucous membrane, from one, to two or three lines; most of them, I think, were elevated not less than two lines: these elevated edges were ragged, and rose nearly perpendicularly from the surface of the bowel, on their outer edges, but descended more gently towards the centre of the plates; and in one or two places, a small extent of the mucous membrane was removed by ulceration. The extent of this ulceration did not exceed a quarter of an inch in one place, and I believe there were but two places in which it extended through the mucous membrane. That part of the mesentery connected with the diseased bowel, was more vascular than natural, and had a red or venous co-

lor. The mesenteric glands in this portion were enlarged and much more solid than natural, though they had not a dark color when cut into, but on the contrary were whitish; this circumstance led me to regard them as in a tubercular condition. The spleen was increased in size, and much diminished in solidity; it broke down too easily under the finger. The liver was healthy, and the kidneys were apparently in the same condition. We found no disease in the lungs; nor had there been any pleuritic affection.

A question now remains whether bleeding would have saved the life of this patient? That his life would have been prolonged by it, I have no doubt, because free bleeding at the onset would have materially influenced the morbid action in the brain, and very possibly have altogether relieved that organ, and its membranes, from whatever congestion or inflammation then existed: and I am unable to see why it would not have had a most salutary influence on the inflammatory action going on in the elliptical plates, mesentery, and its glands. If, indeed, the mesenteric glands were tuberculated no treatment would probably have had much influence on them; yet, they might have remained slightly diseased for years, without doing much injury, as but few of them were in a morbid condition.

Mr. Kidder, aged about twenty-six years, was taken ill on the 4th November. He was located in the third story of the college edifice, in a room that was much exposed to changes of the weather, having one large window opening to the south, and another to the north. The casing of these windows not being well secured, the air was freely admitted at all times; and in cold or cool weather the room was uncomfortable, even with fire.

This gentleman's habits had been, for some years, those of close and laborious application to study; and his diet strictly vegetable with the exception of a little milk occasionally. Brown bread, potatoes, apples, and water, constituted most of his food. For some years past he had worn flannel, but during the few months preceding his illness he had substi-

tuted cotton for it. Two or three days before his illness, he had walked several miles, and returned on the preceding day through rain. He then felt unwell, could not get his room warm, or at least he thought so. On the ensuing day, he was found in his room, complaining of cold, with head-ache, and debility. He was removed to Dr. Stowe's, in whose family he had every attention conferred that humanity could dictate. His apartment was large, and well ventilated; and he was constantly attended either by Professor Stowe, or by one or more of the students, until his death.

I did not see him during the first three weeks of his illness; but he was regularly visited by Dr. Dodge, who had the occasional advice of Drs. Mussey and Worcester. He had constantly taken laxatives or purgatives; and calomel, camphor, and ipecacuanha, as often as thought necessary. He had also been occasionally sponged with warm water. When I first saw this patient I thought him very ill, and so expressed myself to Dr. Stowe. I feared that he would be long sick, and that he would probably not recover. His pulse was from one hundred and twenty to one hundred and thirty per minute; the hearing difficult; the tongue covered with a white fur; the skin mostly dry; the countenance flushed, particularly during the after part of the day; and the eyes had a started appearance; his mind had occasionally wandered, and he was restless, with inclination to stupor.

We directed the further efforts to the mitigation of the fever, or force of reaction, which we endeavored to do by having the body sponged with warm water every few hours, and by giving minute doses of tartrate of antimony every two or four hours: he took the eighth of a grain at a dose; and five grains of the blue-mass were directed every twelve or twenty-four hours, with rhubarb, and, sometimes, with the addition of soda. This course was continued during twenty days, when we flattered ourselves that our patient was doing well. His bowels had been easily moved, and no pain, nor much soreness, or tenderness to the touch had been manifested;

slight meteorism had, however, existed from the beginning. But on the 10th December, the meteoric condition of the bowels suddenly increased, with tenderness and increased gurgling on pressure. In the neighborhood of the anus a swelling was found to exist, which extended over the left hip. From the 10th to the 15th, these symptoms increased, with a more laborious respiration, and less regularity of the pulse; when, on the last named day, a slough was observed anterior to the anus, and on the right side of the perineum: this slough increased until it was two inches in diameter; on the 16th, it suddenly burst open, and a large amount of fæces was discharged through the opening. This singular circumstance of course placed our patient in a dangerous condition. From this time, for many days, fæcal matter combined with pus continued to drain from the opening. His urine also seemed to pass without control, and the tenderness and fulness of the abdomen increased, until the 22d, when to the already unfavorable symptoms, was added hæmorrhage of the bowels; a large amount of blood was evacuated, which seemed to come from a high point of the intestines, and, as afterwards appeared, from the ileum.

To prevent instant death, laudanum and wine were administered in large quantities. To render the patient comfortable, his linen was changed, and his person washed twice a day, until the termination of the case. Soon after the bleeding from the bowels, the extremities of the left side became paralyzed, and continued unaltered until about the 12th of January, when a gradual improvement began; but this improvement was limited, and he did not regain the use of either extremity to any considerable degree. About the same time that paralysis occurred, the left eye inflamed, and an abscess formed in the brow, which suppurated slowly, and when opened discharged matter of a strumous character.

On the second day after the hæmorrhage, beef-tea was given the patient, which he continued to take for some time in considerable quantities, with farinaceous food of various kinds: bread and milk, with potatoes, formed his chief diet.

During most of the time after the formation of the slough, he took four grains of quinine daily, in divided doses; laudanum was given uninterruptedly, until the last, with wine in greater or less quantities—to the extent of a pint daily for some time. The diarrhœa, which had been constant from the time the slough took place, moderated about the 17th. On the 5th January, there was cough, and severe pain in the right side; these continued unabated until the 10th; on the 22d they were much mitigated, and eventually nearly subsided. Towards the termination of the fourth week of his disease, inflamed spots of a circular character appeared, mostly on the abdomen and back; very soon after, pimples or pustules formed, at first filled with a serous fluid, which soon assumed the appearance of purulent matter: these pimples broke in a few days, leaving a small excavation, sometimes a line or more broad; both before and after they discharged matter, they had more the appearance of those produced by tartar-emetic ointment, than any thing else that I now recollect. Deep ulcerations proceeded from some of these spots, and several of them became the source of abscesses, both on the back and abdomen, which, when opened, contained a drachm of matter each; those on the back became the cause of unfavorable bed-sores. On the sacrum a few of these eruptive spots terminated in an extensive sore, about the first of January. The right trochanter or hip, from pressure alone, exhibited a deep slough very soon after. The alkaline poultice seemed to be the best application in removing all the sloughs. To relieve his bed-sores we procured a hydrostatic-bed; this had a most happy effect, and seemed to be the means of prolonging the life of the patient for days. I cannot too warmly recommend this kind of bed to the attention of the profession.

The swelling of the left hip had remained after the sloughing of the perineum for some days, in an undiminished state, when Dr. Dodge made an opening into it, about two inches from the anus, and withdrew a piece of cellular membrane, of considerable extent; fæces with pus were

evacuated at the same opening, and to a considerable amount. A few days after, a small opening took place near the left trochanter through which pus and fæces were also discharged. These occurrences decided that the abscess had a connection with the rectum; we will see by-and-by the nature of the connection.

On the 22d January the patient had much pain in the abdomen, and in the lower part of the rectum, with more flatulence than usual. As he had taken no purgative from the time the perineal slough occurred, I conceived that the fæces had accumulated in a solid form, so that the rectum had not power to discharge them; upon examination I found this to be the case. Injections of warm water were administered, which, by a little manual interference, relieved him of the accumulated mass. I directed a medium dose of castor-oil, which carried off a large amount of fæces. On the 25th, Dr. D. directed more oil, which again acted well. A month had now elapsed since our patient had begun to improve, and notwithstanding the various unfavorable symptoms, his appetite had been good, and he had improved in strength and even in flesh. Profuse and frequently repeated sweating had occurred, which had lessened the force of the circulation; the pulse was less frequent and more regular. But about this time an evident change began to take place for the worse. The sore on the trochanter had enlarged, and had mostly thrown off the dead parts, yet the granulations now seemed to cease filling up the cavity, and those of the perineal sore by the 2d February had become flabby, and much diminished. The skin over the gluteus maximus was disposed to slough. I made an incision several inches long, through the integuments, which brought to view the bare fibre of the maximus. On the 13th, it was evident that his system was about yielding to the disease. I saw him on the 15th, and in a few minutes he breathed his last.

Twenty hours after death I proceeded to examine the body, assisted by Drs. Lawson and Warder. The friends of Mr. Kidder were unwilling that we should open the brain, which

I regretted, as the cause of the paralysis lay no doubt in that organ, or its membranes; we, however, examined carefully the spinal marrow, and the contents of the abdomen and chest.

On opening the abdomen we found the vascularity of the mesentery but slightly more than natural; and the glands appeared in a healthy condition. By looking on the ileum from without, we perceived a number of bluish spots that afterwards proved to be connected with Brunner's glands; these spots were not more than the fourth of an inch in diameter. The spleen and liver appeared healthy, and were smaller than usual in a subject so large; indeed all the abdominal viscera seemed attenuated; probably his meagre way of living had brought this about. Little or no evidence of disease was found in the stomach. In tracing the mucous surface downwards, the valvulæ conniventes were found thickened and contracted; but the inflammation that produced this condition had disappeared, as there was neither redness, nor congestion of the vessels. Peyers' glands could be perceived with difficulty, and all that were discovered seemed to be in a healthy condition; the isolated follicles, however, had been inflamed, though they had nearly regained their wonted condition. Two ulcerations were found in the head of the colon: one, a half inch long, by a third wide, not yet cicatrized; a portion of the mucous membrane nearly thrown off, still floated in the cavity of the bowel, connected with the ulcer by a slender attachment; the other ulceration had completely cicatrized.

The left lung adhered, though not very firmly, throughout its inferior and external surface to the pleura costalis, and considerable fluid was effused, but not amounting to more than a few ounces. The inferior lobe of the left lung, and the superior of the right, were rendered partially impervious to air by tubercles, some of which were as large as a hazel-nut—they had not yet arrived at the stage of softening. This tubercular state of the lungs would in all probability have caused death in a few months.

The pelvic viscera were found in the following condition: That part connecting the bladder with the parietes of the abdomen was inflamed, and had yellowish serum effused in its cells; the cavity of the bladder was so much diminished that it would not have contained more than a gill of fluid. The fundus and posterior part of the bladder, down nearly to the entrance of the ureters, was inflamed, and the walls were three-eighths of an inch thick. On the mucous surface there was no disease in the inferior part, but above the entrance of the ureters, it was thickened and corrugated. This condition of so important an organ, would, of itself, have rendered life miserable. The mucous coat of the rectum was thickened and much congested; about an inch and a-half above the anus, on the left side, was an opening through which the fæces had passed; this orifice would admit the end of the finger with ease. It descended along the lateral and inferior side of the rectum, and eventually opened on the right side of the raphe of the perineum, where the first slough took place; but before it arrived at this point, it gave off a branch, which terminated in the great cavity over the gluteus maximus. This muscle throughout its whole extent was completely bare. The cavity extended some distance beneath the fascia of the thigh; it was nine or ten inches long, and reached from the perineum to the trochanter; and contained during most of the time pus combined with fæces. It is my opinion, that this cavity first discharged its contents into the rectum, and that, afterwards, the fæces were pressed into it. We examined the spinal cord through about a foot of its length, beginning at the last of the cervical vertebræ, and descending along the dorsal: we were unable to discover any disease.

The two following cases occurred in the family of the Rev. E. Goodman: Henry, the elder of the two, was twelve years old, and Moses nine. Henry had apparently a good constitution; but the younger had for a long time been occasionally affected by chest diseases; this was attributed to his simulating the diseases of his mother, who has long labored under a

disease of the lung; indeed the feebleness of her constitution made us early fear the result of the cases under consideration.

The elder boy was taken on the 23d December, with chills, pain in the head, and dullness of hearing, and was confined to bed at once. His father administered thoroughwort, &c., and on the 24th he had an alvine evacuation; from this time his bowels remained easily moved, until near the termination of his illness. The pulse was one hundred, or one hundred and ten, regular, and had considerable strength, when I first saw him, which was on the sixth, or seventh day of his illness. Dr. Dodge had seen him once or twice before. At the beginning, his tongue had a white coat, which continued until the 27th, when it became red down the middle, and afterwards over the whole surface. When this was discovered Dr. D. was called in; antimony was directed in doses of one-tenth of a grain, every few hours, and blue-mass, rhubarb, and soda, so given as to produce two or three evacuations daily. The warm shower-bath was also directed, from one to three times a day. This course was steadily pursued until the 16th day; during this period his pulse gradually abated until it was only ninety per minute. Sometime during the night of this day, and a little after having had a discharge from his bowels, he complained of severe pain in the abdomen. I saw him on the following day, and found his breathing laborious, his abdomen swollen, and tender to the touch, accompanied with frequent disposition to vomit. Although his bowels had been somewhat tender and flatulent, yet it was obvious, that some circumstance of a most serious kind had given rise to these symptoms, as it was now evident that peritoneal inflammation had commenced, and that the case was beyond the control of medicine. I prescribed morphine, and minute portions of calomel, which were to be repeated occasionally, with fomentations, until the next visit. On the next day, the violence of the pain had yielded, but the case appeared equally hopeless. Dry cupping was resorted to with some advantage.

Late in the evening a consultation was held with Dr. Mussey; little, however, resulted from it, as nothing more of importance was attempted. Before the consultation, a few small doses of cathartic medicine had been administered, but after developments showed that the prescription was not judicious. His mouth, which had been sore from the beginning, was now worse; and the head-ache that had also existed from the commencement, now was more intense. At the end of twenty days from the time he had been taken, death supervened.

Dr. Dodge and myself examined the body eighteen hours after death. On cutting into the abdomen we found considerable lymph effused, which in the lower part of the cavity was mixed with a quantity of fæcal matter, that had escaped from an ulceration in the ilium. The bowels were extensively glued together. A portion of the ileum, six inches distant from its termination, was congested and of a venous color. That part of the mesentery connected with it was deeply tinged with blood. Some of the mesenteric glands were diseased, and enlarged, and one contained about a drachm of badly digested pus. This abscess would no doubt have burst into the cavity of the peritoneum, had death not supervened so early. We found the spleen enlarged, of a bluish color, and the substance easily broken down; but the liver and kidneys were healthy in appearance. The mucous surface of the stomach was healthy, unless that portion most nearly connected with the spleen had too much vascularity; but as we traversed the mucous surface of the ileum, we discovered deep discoloration of it, through a space of about fourteen inches, corresponding with the external discoloration. Almost in the centre of this congested part was the perforation of the bowel. This perforation would have admitted a common quill. Its edges were not elevated, and the edge of the muscular coat was black. There was no evidence that there had been a gland where the perforation took place, neither did we find, any where in the diseased surface, the appearance of elliptical plates or isolated follicles. But below this congested part,

in a space of six inches, which reached to the ilio-cœcal valve, these plates were numerous: they seemed altogether healthy. Their folds could be distinctly seen through the mucous membrane, yet they had not in the least elevated it. The lungs were in a morbid condition. There were no lenticular spots, nor sudamina on the skin, nor had any been observed during the boy's illness.

Moses, the younger boy, was taken sick on the 31st December, after having endured much fatigue through the day, in acting as carrier of the Watchman of the Valley, for his father. He had head-ache, and pain in the bowels, for a day or two before he was taken down. On the 1st of January, he took a blue-pill which acted freely. During two or three days after the 1st, his mind constantly wandered. In the first few days there was but little done; I did not see him until the watching had terminated in sleep, which continued almost constantly for several days. A very mild course, consisting of laxatives and warm shower-baths, &c., was pursued for several days, or until the end of the tenth day. There appeared to be nothing unfavorable in his pulse or its action; his respiration was laborious, and quick, though he did not complain of pain in the chest. Meteorism had existed to some extent from the beginning, but it now increased. On the 15th Dr. Mussey saw him in consultation with us. He was cupped, and stimulants were directed; his reason from this time wandered, and he succumbed on the 18th.

On examining the body sixteen hours after death, we found the following appearances: Spleen enlarged and easily broken down. The peritoneum in a healthy condition; the mesenteric glands healthy; the mesentery but little, if at all, congested or vascular. But on traversing the mucous surface of the alimentary canal, we found through the space of three feet, the elliptical plates all ulcerated; their edges not raised, but the ulceration had removed the plates down to the muscular coat. There was very little discoloration of the mucous membrane, and the ulcerated as well as surrounding parts were pale. No unhealthy appearances existed in the liver

Lymph and serum to the amount of six or eight ounces were found in the right pleura; and the inferior lobe of the right lung was carnified, and the whole lung congested. The evidences of disease were much less marked in the left lung, as there was but little solidification of its substance, and the serum only amounted to two or three ounces.

Mr. Maxwell, a young gentleman of rather slender make, and about twenty-five years of age, who had for some time, probably years, abstained from animal food almost entirely, was attacked with fever on the 2d November. He had been unwell for several days previous, but had paid little attention to it; on this day, however, he took oil. On the 4th, Dr. Dodge directed another dose of oil, which operated on the 5th. Head-ache had existed from the first, but it became constant on the 7th November, and on the 9th he was removed from his room to Professor Allen's, in whose family he received the most humane attention until his recovery. On the 12th the head-ache was unabated, and was indeed worse; it was thought, although the fever had existed ten days, that bleeding might be of service; a vein was opened, but fainting almost immediately ensued, a circumstance that mostly takes place in the advanced stages of this fever. But little advantage was derived from the operation. During the second and third week of his disease, applications of cold water were made to the head; they had the effect of relieving it when the cold was intense, but when his head was easy, he always felt fulness and oppression of the chest; this might possibly have been the cause of palpitation of the heart, of which he complained much during the first three weeks. His pulse had, however, been irregular from the beginning, and generally ranged from one hundred and thirty to one hundred and forty per minute throughout his illness.

I first saw this patient on the 25th November. I then found most of the foregoing symptoms existing. His mouth was covered with a viscid mucus, and was slightly sore. The bowels had been sufficiently open, and had even been dis-

posed to diarrhœa; there was meteorism with tenderness to the touch over the abdominal parietes. Although he had taken some calomel, I directed ten grains of blue-mass every four hours, until the bowels should be moved, and a blister was applied to the back of the neck, by which complete relief was obtained. In two or three days after I saw him, ptyalism occurred, which evidently had a happy effect. He gradually improved for about a week. His appetite began to return, and he ate two oysters with a little other nourishment. Twelve hours after, his appetite craved more, and another oyster was taken. His stomach refused to digest them, and although when they were eaten he was able to sit up, he suddenly relapsed, and in three days his abdomen became greatly distended, and tender; delirium soon supervened, and continued without intermission during four weeks. His pulse again beat one hundred and thirty per minute, was irregular, and sometimes intermittent. We first gave oil, which acted pretty freely; and he occasionally, afterwards, took rhubarb and soda, with oil sometimes. Very soon after this relapse Dr. George Hildreth, of Marietta, arrived on a visit to his brother, whose case was first described, and who was still confined to bed. In consultation about Maxwell's case, he proposed that antimonials should be given in minute doses for the purpose of regulating the action of the heart. We assented to this suggestion, and enjoined the Dr. to watch the effects of the medicine. I believe that sickness was once produced by the antimony, and he vomited bile. This eventually had a favorable influence on the circulatory system. Injections were used for about a week, as occasion required. Blistering over the abdomen was also resorted to, and with advantage. At the end of a week the abdominal irritation was much mitigated, and by the 1st January, he was much better. He now slowly improved, and by the middle of February, he thought himself able to go down stairs; but about this time he ate one or two green apples, which produced colic in a few hours; this, however, was soon relieved. The pulse, even at this time, was irregular, and ra-

pid. I now understand that it is more natural, and that this young gentleman enjoys good health.

Mr. Hogshead, was seized with the fever on the 21st of November. Dr. Dodge, I think, saw him on the 22d, and gave ten grains calomel, with scammony, &c.; this medicine had been repeated before I saw him, which I think was on the 21st February. Evacuations had not been obtained; his mouth was inflamed; he spit considerably; and his pulse was one hundred and twenty per minute, full, and resisting, but regular. The surface was warm, the head ached, and he was restless. He had not been bled, but warm sponging had been resorted to with advantage. I directed an emetic of ipecacuanha, which operated moderately; this was followed by purgatives, which acted pretty well. This patient was throughout his sickness more constipated than any of the others. He generally slept badly, unless under the influence of opium. On the 10th day of the fever, he suddenly took a severe pain in the left side of the chest; and very soon after he expectorated pretty large quantities of blood, slightly mixed with mucous. A severe cough began with this condition of the lungs, and continued throughout the remainder of the disease; it received a check, however, on the 15th January, by the sudden discharge of about a quart of mucus and pus, which took place within a few hours; this gave him immedidiate relief from the most distressing symptoms. Anterior to this, the cough had been very severe; for many days he had thrown up rust-colored matter, which had been expectorated with difficulty, and was accompanied with severe pain, and with a respiration of thirty-six per minute; the pulse was one hundred and forty, or one hundred and fifty at times. During the early period of his disease, he suffered from a burning sensation in the pit of the stomach, but this symptom yielded after some days. Emaciation rapidly followed the beginning of the fever, and continued until he was unusually reduced; this circumstance caused much trouble during the latter part of the disease, as bed-sores supervened, which were painful, and caused much irritation.

So soon as the lungs became affected, we began the use of antimonials, gum-arabic, and morphine, with the tincture of sanguinaria. The antimony, however, with laudanum, or morphine, was the chief remedy; the fifth of a grain of tartrate of antimony was steadily given every two or four hours, during many days, and opiates were administered at night in free doses, and sometimes were given every six hours. As the patient's bowels were constipated, oil, salts, or jalap, were given daily, or nearly so. Blisters were repeatedly applied over the chest, and poultices of bread and milk were often used to relieve pain, which they seldom failed to do. By pursuing a steady course, our patient eventually survived, and was completely convalescent at the end of three months from the beginning of the fever. After the case had progressed for some time, we regretted that we had not drawn blood, as we thought that the violent action of the heart would have been subdued by it, and that the inflammation of the left lung would have been prevented.

Hæmorrhage from the bowels may at all times be considered a grave symptom, and one that not unfrequently occurs in this fever. A case has already been detailed in which this symptom was manifested; that case did not terminate fatally from the effects of hæmorrhage, nor from lesions which had given origin to it; but from other and very different causes. The treatment adopted to prevent the recurrence of bleeding in that case, has been hitherto successful in my hands when hæmorrhage has occurred in typhoid fever. I therefore feel anxious to impress on the reader's mind a clear idea of the mode of treatment. Anterior to 1834, I had never known a case of this fever recover in which hæmorrhage had taken place; and I had uniformly found that daily purgation had been advised and pursued. This fact led me to the conclusion, that purgative medicines should not be given in such cases. I accordingly determined that I would in the treatment of a number of cases, should they occur to me, avoid all laxative medicines, and that I would keep the peristaltic action quiet through a number of days. This deter-

mination I have carried out in the treatment of a considerable number of cases during the last nine years, and I have not as yet been disappointed. The following case I will detail, in order to illustrate my views of the method of treatment that should be adopted in hæmorrhage of the bowels, as well as for considerations growing out of the nature of the disease.

Dr. Dodge, of Cincinnati, aged thirty-five years, had attended the patients at the Lane Seminary, from the commencement of the fever. Most of the time he had visited the establishment every other day; this attention, combined with his other professional duties, rendered his business laborious. He was unwell for several weeks before he was confined to bed; but on the 14th January, he began to have restless nights with occasional head-ache, accompanied with a sense of fulness of the abdomen. He was constipated, and his appetite was variable. During this time he attended to his professional duties with his usual industry, but took aperients occasionally, with alteratives mostly composed of the blue-mass. About a week before he was confined, he bled himself, but not freely, as he was soon disposed to faint. On the 27th January, he was first confined to his room, and on the 28th I was called to see him. I found his pulse hard and full, but not very frequent, as his natural pulse is not over sixty per minute; there was restlessness and vigilance; the skin was dry; there was head-ache; his tongue was covered with a white fur. Under all these circumstances, I proposed to bleed him, to which he did not agree; I then directed an emetic of ipecacuanha, which acted mildly, and brought on free prespiration, which lasted for several hours. To keep up this action three grains of calomel, and ten of Dover's powder, were given, which had the effect through the night of the 28th. On the 29th, he took salts, which acted well. On the 30th, he sat up, and left his room for a few hours; but on the 31st, his head-ache returned, and in the afternoon, I bled him to the fainting point, and showered him with warm water. The combined influence of these means, very much

subdued the fever through the night, and on the morning of the 31st, I gave him the third of a grain of morphine, to relieve the purging and the restlessness. The day was spent comfortably, but not without fever; in the evening he took the eighth of a grain of morphine, and at 2 P. M., of the 1st February, the eighth of a grain more. He had a tranquil day, but the night was spent with fever. In the morning of the 2d, he took one and a half grains of calomel, and eight of jalap; this small dose acted several times. The following night was spent pretty well. I saw him however, at five A. M., and found him with considerable fever. I concluded to begin the use of antimonials, but my patient neither then, nor afterwards, was willing to continue their use long—owing to this prejudice, they were not persevered in with constancy; he, however, took the eighth of a grain of tartrate of antimony every four hours; but two or three doses were taken before sickness supervened. His pulse became soft, and was reduced in frequency. Up to the 6th, his bowels were kept open with small doses of calomel and jalap, which answered the purpose, as his bowels were now very easily moved. Minute doses of antimony were occasionally given during this time, to moderate the fever; and morphine was taken to produce sleep. His tongue still kept well shaped, and was covered with a white fur; his cheeks began to be flushed in the afternoon, particularly the right cheek. His pulse during this time ranged from seventy-two to seventy-eight.

About the 4th or 5th, Professor Drake saw the patient, and proposed cupping over the right side of the abdomen. This advice was founded on the fact, that pain was felt on firm pressure on that part; but the suggestion was not acted on for several days; not because it was not proper, but for the reason that other applications (fomentations of various kinds) had been used occasionally from the beginning, and had given relief when uneasiness was experienced. Very few days had elapsed before I regretted that I had not insisted on the use of cups when they had been proposed by the Professor, for on the 8th more serious symptoms manifested

themselves. After the 6th, the patient's bowels were moved with more difficulty, and there was more desire to have evacuations. On the 8th, he took early in the day, ten grains rhubarb, with one grain of calomel; and at noon four grains of jalap, and one grain of calomel; also, five grains of blue-mass, with an injection, which brought away bloody serum, with some small clots. It was obvious that considerable hæmorrhage had taken place, as the force of the pulse was much diminished. Immediately on the discharge of the clots and serum, I gave the sixth of a grain of morphine. A few hours after, the pulse was seventy-two, round and full. At 11 o'clock of the 9th, his bowels acted freely, no doubt from the effects of the medicine taken on the 8th. This evacuation contained considerable blood; the pulse was much reduced in power, and a little in frequency; the surface was cool, and without much perspiration. At 5 o'clock, A. M., of the 10th, I saw him, and found that the morphine taken after the evacuation, had kept him easy; his face was flushed, and at ten A. M., he complained of pain in the region of the ileo-cœcal valve, with soreness. The pain was unremitted, and continued so for some time. I put dry cups over the abdomen, had him scarified and cupped, and fomentations were constantly used; he was eventually blistered, and the oil of turpentine was used as a rubefacient: which means relieved the pain and tenderness on pressure. The meteorism, although existing from the beginning, now became worse and more distressing. Up to the 13th, no blood nor other matter, had passed, from the bowels. He had taken on the morning of the 12th, without my consent, ℈i. rhubarb, and fifteen grains blue-mass, which operated pretty freely on the evening of the same day, but the evacuation contained no blood; this was soon followed by another, which contained a gill. Morphine, camphor, and ipecacuanha, were given, and the morphine was continued with more regularity after the last hæmorrhage than it had been. On the 15th, his fever was less, pulse soft and regular, and the soreness of the side was mitigated; on the 16th the bowels were still

more easy, and perspiration had extended further over the body. The amount of pain and abdominal soreness experienced in this case, may be conceived, when it is stated, that he was unable to lie on the left side, and only partially on the right; he was also unable to move himself, and whenever he was moved, he suffered severe pain.

From the 16th to the 24th, the soreness gradually subsided, and he had no bleeding. He took camphor, morphine, and ipecacuanha, up to the 18th, when the camphor was laid aside, and the others continued. Little or no other medicine was given during this period; indeed, my object was to avoid as much as possible alvine dejections. On the 17th, the tongue became brown, on the centre and back parts, which continued to the 24th. From the time that his bowels first became painful, he had difficulty in voiding urine for many days, as the muscles of the abdomen seemed not to be under the control of the will, and probably the bladder was in the same situation; he passed urine, however, about once every twenty-four hours. Through this period of eight days the pulse was almost constantly seventy-two per minute.

From the 24th, to the 29th, the symptoms gradually abated; the tongue began to clean on the 27th, and was left brown. No purgatives were given, but the bowels occasionally acted. Morphine, ipecacuanha, and small quantities of blue-pill, were alone given, and these promoted or seemed to promote perspiration. The occasional exacerbations were moderated by warm sponging. On the 1st March, he ate a small quantity of food, which was the first that he had taken during thirty days. By the 2d March, he was convalescent. A little restlessness followed the suspension of the use of the morphine, but he was no longer subjected to diarrhœa, to which, as has been seen, there was a disposition throughout most of the disease; he had now to take some mild laxatives to regulate the action of the bowels. His improvement continued until the 15th, when the tongue became sore, and the bronchial tubes were clogged. A cough supervened, which was most severe during the evenings. The mucous surface

of the alimentary canal was also involved. This condition, I think, was probably caused by a too free use of condiments, calf's-foot-jelly, &c. His pulse now rose to ninety or ninety-five; this condition lasted for ten days, during which there was much irritation and debility; the skin was unusually dry, and there was constant vigilance, unless under the use of morphine. To render the skin more soft, he was rubbed all over with *fine* oil: this gave the greatest relief imaginable during the succeeding twenty-four hours, and after a few days, it was repeated, but not, I believe with the same beneficial effects. I had long wished for a case in which the external application of oil might be tried, as I believed, that in the latter stages of typhoid fever, it would be found useful; and the trial made with it in the present case, has satisfied me that many cases of fever would be mitigated by occasional application of oil over the whole surface. On the 25th March, convalescence was again established, and by the 1st of May, the Dr. was able to attend to his professional business.

During the illness of this gentleman, I had the occasional counsel of a number of the professional men in this city, but more particularly that of Professors Mussey and Harrison, which, during several days of the doctor's illness, gave me much consolation.

Before closing this paper, it is deemed proper to consider the relation in which the fever that has just been described stands to that which has usually been called typhus or typhoid fever, of New England and other parts of the United States, as well as of Europe, &c. It is known to the profession, that Professor Bartlett has written a work which extensively treats of the difference between what is called the typhus of the British, and the typhoid of the French; and has labored to show that the typhus of Nathan Smith, or of New England, is identical with what the French call typhoid fever.

We are not left in suspense about the diagnosis of this fever, for the Professor, with Louis, Chomel, &c., admits that

the typhoid fever has characteristics which never vary, or in other words, that "in all cases of typhoid fever there is lesion of the small intestines. This lesion is peculiar, it is found in no other disease." Fevers not showing after death this lesion cannot be considered typhoid. Dr. Bartlett thinks we have a much less definite knowledge of the lesions peculiar to other diseases than of this.

Now the fever at the Lane Seminary appeared mostly among the students, and was confined within a very limited space; one case seemed to grow out of another, all having in many respects great similarity; yet the morbid lesions were not entirely the same, as related to the small intestines. I have reasons to induce me to believe, that a number of of those who recovered had no serious lesions, if any, of the small intestines; I will, however, adduce one case to demonstrate this, which will go to show, that there could have been little more than congestion of the mucous surface of the ileum, anterior to a certain period in the fever.

Mr. Lindsey, aged about twenty-three, had waited on Kidder for some days; and had not obtained his usual amount of sleep. He complained of being unwell—of dullness, and occasional sweating, with loss of appetite, &c. I advised him to cease from bodily exertion, and to take medicine. He located himself in comfortable lodgings, and was seen by Dr. Worcester, and then by Dr. Dodge. Four or five days after he began regularly to take medicine, I saw him. He then had a meteoric condition of the bowels, which were slightly tender to the touch; and his tongue was smooth and red. The pulse ranged from ninety to more than one hundred per minute, and was full and resisting. The bowels were moved easily—externally there were no lenticular spots, but he had sudamina. His fever progressed for about four weeks, and was treated in the usual way. From the rather more than usual fulness of the abdomen, Dr. Dodge and myself feared that there existed extensive ulceration of the elliptical plates, but an unexpected circumstance occurred, which determined that no such condition was present. We found

our patient without meteorism, soreness or tenderness of the abdomen; but we found both the parotid glands sore, hard, and somewhat swelled. This inflammation of these glands went on through a number of days. The swelling threatened to terminate in suppuration. As it advanced the face became involved in it, and the eyes were for a short time nearly closed. Fomentations were used, and free leeching, with blisters, by which, and other means, the patient was relieved without suppuration, and rapidly recovered his health. This change took place about four weeks from the beginning.

The question now is, whether this patient could have had ulceration of Peyer's glands, anterior to the swelling of the parotids. The very sudden translation of the local affection from the abdomen to these glands, proves to my satisfaction that no ulceration did exist; for had it existed no cure could have taken place in so short a time.

But we will refer to the lesions in those cases that proved fatal, and see whether they agree with the notions of those writers who have taken so decided a stand on the question of certain lesions being essential to typhoid fever. In the case of Olney, the elliptical plates were diseased in the manner laid down by Louis, as essential to this form of fever; but the mesenteric glands were not affected in the way that this distinguished pathologist thinks necessary to typhoid; for instead of being rose-colored and softened, what few of them were at all diseased, were white in the centre, and much harder than usual. He had no lenticular spots, nor sudamina. Death resulted in this case not from the condition of the abdominal viscera, but from that of the brain and its membranes.

In the two cases that occurred in Mr. Goodman's family, it has been observed that the lesions were different. Neither of the patients had lenticular rose-colored spots, nor sudamina; but one had ulceration of Peyer's glands; yet the mesenteric glands were almost, if not altogether, free from disease. In the other the elliptical plates were healthy,

but there was a congested or inflamed mucous surface in a small part of the ileum, and that part of the mesentery connected with it, and several of the glands were affected in the manner Louis thinks essential to typhoid. Kidder's case seems to demonstrate that the elliptical plates really had never been diseased; but that the isolated follicles had been inflamed, though not ulcerated; here also, the mesenteric glands were found apparently healthy.

These actual conditions of the lesions as they appeared after death, seem to decide, that this fever, although it had many of the characteristics of the typhoid fever of the French, &c., still wanted some of the essential elements of that fever; for Bartlett says, that the lesion of Peyer's glands is peculiar to typhus fever, and is found in no other disease. This assertion, if founded in truth, places the Lane Seminary fever in a singular situation; as some of the cases had no diseased condition of the elliptical plates and some had. The patients had lived together in the same house, before they were taken ill, and most of them eat at the same table. The disease seemed in all other respects alike, but our author would, according to his theory, divide it into different species. That this was not the case, I have not a doubt, because the experience I have had in similar fevers, during the past twenty years, assures me that a fever of this grade does exist, and does not at all times exhibit those symptoms, or autopsic developments, which are made essential in the typhoid of Louis. Even admitting that Louis has discovered a real distinction in the typhus fevers of a vast metropolis like Paris, it is not very likely that an identical fever would be found in a country so sparsely populated as this, and where the habits of the people are so widely different from those of the cities of France.

I regret that Professor Bartlett should have labored on this point so much, with so little prospect of fixing the true diagnosis of this subdivision of typhus fevers, or of the continued or winter fevers of the United States. Indeed, if the description of the French typhoid fever, as given by Chomel

be considered correct, I am inclined to the opinion that the description does not altogether suit the winter fevers of this country. He says that out of one hundred and twelve cases, seventy-three came on suddenly. This statement seems to show, that our typhoid fevers are different in their mode of attack; for although we occasionally meet with patients who had been taken down within a few hours, yet in a very large number of those whom I have attended, or seen, the disease was slowly developed, a number of days often elapsing before the patients were confined to bed. This condition was known by loss of appetite, unusual disposition to sleep, or the reverse, with lassitude, &c. The case of Dr. Dodge will go to show the truth of this; he had fulness of the abdomen, restless nights, with some head-ache, and irregular action of the skin for two or three weeks before he declined business. I found in almost all the cases at Walnut-Hills, that several days had elapsed before the patient would acknowledge himself seriously ill; and when at last confined to bed, he could hardly tell how he had got to that situation; for frequently the chills were so light, that the patients were at a loss to know whether they actually were chills, or whether the cold sensation did not proceed from some external cause. That the winter fevers of this country always exhibit the lenticular spots, and mostly sudamina, I do not believe. If lenticular, rose-colored spots, had always existed in those cases which at various times have fallen under my care, I think I should have observed them; sudamina certainly very often occur in bad cases, but they not unfrequently appear in other diseases. I am aware that Louis has seen cases in which the patient had walked about for a week or two, and some of them even attended to their ordinary business during that time; this is not unfrequently the case in this country, and in my opinion is one of the strongest evidences of a close relation between the two fevers.

None of these symptoms are, however, uniformly manifested in every case. The eruptions accompanying these fevers I regard as accidental, or owing to circumstances be-

longing to individual cases; and I have but little doubt, that they appear more frequently in Europe, than in this country, and more often in cities than in other localities; which, if so, I suppose is owing to the inferior quality of the food and clothing of the people of Europe, and of cities, to that of those in the country. I make this remark with regard to the poor.

Professor Bartlett labors with diligence to demonstrate the characteristics of typhoid fever, but when he comes to the treatment, he is much less decisive; and although he has had an experience of fifteen years in it, he does not come to any direct conclusion, as to the mode of treatment that should be adopted; he even thinks that no treatment has had as much good effect, as any or most of the methods that have been pursued by different practitioners. When a distinguished *medical man* pays, through a considerable period, much attention to a disease, it might at least be expected, that he would come to a decision as to the remediate means that should be adopted. But in the present case, we are disappointed; and I cannot avoid dissenting from the Professor, as I believe the typhoid fever can be very considerably controlled by medicine, and that favorably.

That many have lost their lives by the rash treatment of practitioners, I acknowledge; but such practice is founded upon false premises. A belief in the cutting short of fevers by a herculean method of treatment, has caused not a few practitioners to do too much in continued fevers of a typhoid character. This is particularly the case in the West, but in the East they possibly have erred upon the ground of debility, and have long thought stimulants too important in the treatment of these fevers. When this fever is rightly understood, the mode of treatment can be so regulated that much benefit will result. If we reflect, that there is mostly, if not always, a lesion of the small intestines, more or less extensive, as well as of the mesentery, and its glands; often of the lungs, brain, or its membranes; we will at least come to the conclusion that a mitigation of these local affections

may be brought about; and if this can be done, the fever wears itself out, without producing any mortal lesion. But Dr. Bartlett thinks that the cause of this fever exists in the condition of the blood; this notion may be correct, very possibly is, yet we often find patients getting well; and I think more often under some methods of treatment than others, or where none has been adopted.

It may not be improper to consider a little further the relation in which the disease of which we are speaking stands to those of a similar character, that have appeared in the United States, and particularly in the Mississippi valley. It is now nearly thirty years since my attention was first drawn to the continued fevers of the West; this was in the winter and spring of 1814. The fever occurred in Columbiana county, Ohio, where I then resided. A few of the cases, I believe, lingered through the summer of that year. Although I had not at that time even thought of studying medicine, I had ample opportunities to examine with care a number of cases which I waited on. This fever was at that time thought to be the same disease that had a short time before prevailed in New England, and in other Eastern districts of our country, as well as in Canada. In the year of which I speak, I believe it extended, in Eastern Ohio, from Cleaveland as far South as Marietta; and was more general and grave in its character than it has since been in the same district of country. Some of the patients whom I knew, had the disease from one week, to two or three months: in all those cases in which it ran its course early, death was the result.

I saw no more of this disease until years had rolled away. In 1823, sixteen cases occurred on an elevated point, two or three miles south-east of the town of New Lisbon. Several of these cases I saw in consultation; and I found them treated with bark, wine, calomel, emetics, blisters, and corrosive sublimate mixed with lard, and rubbed on different parts of the body. Cathartics might be added with other articles. Of those who submitted to this treatment, but three or four survived, and eight died. One poor fellow had resisted the doc-

tors, and had taken a little salts occasionally, up to the time I saw him—I said to him, *aside*, that he had better continue the same course, which he did, and recovered. The above disease appeared late in the fall, and was considerably scattered over the southern part of the county, which is bounded on one side by the Ohio, and on the other by Little Beaver creek, and is hilly and *thin*. During the same year but earlier, intermitting and remitting fevers prevailed extensively, on the low grounds near New Lisbon, and on Beaver creek, but was nearly unknown on the high grounds around and has been so at all times.

At various periods, since that time, I have observed and treated a continued fever, that mostly occurred during the winter; but sometimes, and not unfrequently, began towards the middle or latter part of autumn, and continued through the winter. This circumstance in its history has caused physicians (as I think) to class it with remitting fevers, at least this error has frequently taken place within my knowledge. It has, however, more often been called congestive fever, particularly in Illinois, Indiana, and other western districts. Since my removal from Eastern Ohio, I have heard of its being there called cold plague.

Probably there are but few points in our profession more difficult than, when this fever begins in autumn, or in the early part of the season, to decide whether it be remitting or typhoid. The typhoid, however, is mostly ushered in very slowly, has a peculiar condition of the skin, and is more continued in its character; it has the tendency to spread in a family where it begins, not by a sudden impression made at once, but by slow degrees, seizing the family and friends of the sick, one by one; indeed, all the cases in the same neighborhood can be frequently traced to a single one, as a nucleus. This was particularly the case at Walnut Hills. Mr. Kidder's case seemed peculiarly productive of others. Months sometimes elapses before this tendency to spread has an end.

One of the most conclusive evidences of its character, that

I know of, is its location. North of forty-three degrees of latitude, in North America, I presume this is almost the only fever which exists, aside from the erruptive and inflammatory kinds; and very possibly, in these northern regions, altitude has but little to do with its existence, or non-existence. Indeed I have been informed that winter fevers in Canada are those which are most dreaded. But when we get further South, we meet with remitting and intermitting fevers in certain localities: these localities are mostly alluvial in their character, though sometimes extensive plateaus are subjected to them. This is mostly the case when there is stagnant water on considerable portions of the surface. An exuberance of decaying and declining vegetable matter seems to be mostly essential to the propagation of these fevers. Persons living in high situations sometimes take remitting, or intermitting fever, merely by making occasional visits to districts subject to it. Singular circumstances occasionally occur; individuals living in localities wholly exempt from those fevers, may spend some days in a malarious district, during autumn, and no evidence of disease will be manifested until the ensuing spring, when they will be seized with the remitting or intermitting fever.

But as I have said the typhoid fever exists south of forty-three degrees; it is limited to a narrow space, and is mostly, if not altogether, confined to those situations in which the remitting and intermitting fevers do not occur. These localities, are most of the elevated table-lands of the Mississippi valley, and all the more rugged country through which the Ohio and its tributaries flow, with other like localities. That part of the country lying south-east of the Ohio, corresponds more particularly to this description. I do not recollect to have ever known the typhoid fever begin and spread on alluvions, but I have often witnessed it in the contiguous regions.

If I be not mistaken, this fever has occasionally occurred on the more elevated prairies of the West. Many of these prairies, I think, are situated from two, to two hundred and fifty

feet above the rivers that exist in those regions. I travelled six hundred miles in Illinois, during the fall of 1835, and found that on the high prairies winter fevers had been not unfrequent. Indiana has also suffered at many points with a similar disease. It has several times, I am informed, visited Richmond in that State; and during the past winter I heard of it as existing on the high lands within a few miles of Lawrenceburgh. From all I can learn, Ohio was visited by it at various points during the past winter and preceding fall.

Of the remote or exciting causes of this fever in our own country, nothing as yet is definitely known. So far as my own observation has extended, I feel well assured that the geological construction of the country has much to do with its origin; yet very different combinations of substratum at different times are visited by it. I refer the reader to some observations made by me, on this subject, in this Journal, vol. v., p. 20.

The mode of living has no doubt much to do with the origin of typhoid fever; yet I have known it to originate in very cleanly families, but seldom among those who lived well as to diet, and who were in the habit of eating animal food. This may, however, more frequently occur than I am aware of. The only fatal cases among the students, at the Lane Seminary, took place among those who had for a considerable time abstained from animal food, and all who were Grahamites had the fever. The following paragraphs are from a letter written by one of these gentlemen, Mr. H. E. Peck: I transcribe them for the benefit of those in favor of the vegetable plan of living.

As soon as he arrived at the Lane Seminary, "I began" he says, "to reduce my diet and curtail my hours of sleep—had previously lived upon a mixed, generous diet, and slept from seven to nine hours per diem; left off tea and coffee soon after my arrival here, next erased butter from my bill of fare, and finally gave up meat; lived chiefly on Graham bread, potatoes, baked apples and milk, and allowed my-

self between six and seven hours sleep daily, and every morning upon rising took a cold shower-bath. Found soon after I commenced reducing my diet, that I was growing weaker, and that my stomach was losing its tone—therefore adopted a vigorous system of exercise at wood-chopping; but instead of improving my health, labor seemed to diminish my muscular energy, and enervate my stomach, which at last became so *fractious*, that it would not bear any, even of the mildest food, without souring. My stomach was in this condition when I began to be troubled with an icy coldness of my feet, and occasional pains in my head. These symptoms continued for one or two weeks, when I was seized with pains especially in my limbs, and in the small of my back, and with a severe head-ache." These symptoms were soon followed by fever, with a pulse one hundred or one hundred and ten, &c. His fever lasted only fifteen days, and was of a medium character as to severity. He was treated by mild purgatives with occasional mercurials—and tartar-emetic in minute doses. During the first part of his convalescence, his stomach seemed in a good condition, but of a sudden, whatever he took soured; as yet he had taken little but vegetable food. Dr. Dodge ordered a change of diet, of which animal matter was to constitute a considerable portion. "This change," says Mr. Peck, "seemed to have a very beneficial effect on my stomach, which has since entirely recovered its wonted tone; I think my health is now better than it has been for three years." This letter was written a few weeks after his recovery, and now, in June, I believe his health still continues good.

In my early boyhood, a settlement of Highland Scotch was made in the neighborhood of my father's residence. These people endured great fatigue in making improvements in a new country; and added to their other hardships, was a megre diet, chiefly vegetable. The early pioneers of the country remonstrated with them, against their mode of living. The remonstrance, however, had no effect; and in about a year afterwards a slow fever broke out among them, I think early

in the spring of 1807, and continued during a number of months—many of them fell victims to the disease. Its progress was slow, death only taking place after the lapse of several weeks.

That the hardships and abstemious diet of this people brought on the fever, I have little doubt, as those who lived in the same neighborhood and pursued a different manner of living, were not subject to it.

The location of the neighborhood in which this fever occurred, is near the Ohio river, in this State, and near its eastern border. The soil is thin, and the altitude equal to that of any other point in the State.

June, 1843.

ART. II.—*Operation of Lithotrity.* By WILLIAM A. McDOWELL, M.D., of Louisville.

A detail of the following operation is offered to the profession, chiefly on account of the advantage derived from the co-operation of the *slippery-elm* bougie; an instrument which, for many years past, I have employed in the treatment of strictures, with a greater degree of success than I have ever seen ascribed to any other method.

J. V., aged eighteen, well grown, and of good constitution, who had suffered from symptoms of stone since his earliest recollection, was sounded August 17th, 1843. The sound indicated a plurality of stones—emitting the click right and left when twirled to either side. Prescribed decoction of mallows for constant drink; bowels to be kept loose with crem. tart.; moderate and unstimulating diet, preparatory to the operation of lithotrity.

The sound used, measures within a fraction of four lines in circumference; it passed the prostate gland with difficulty, and gave more pain than any subsequent step in the

operation. To remedy this condition, three graduated bougies of seasoned slippery-elm bark were ordered, the first about the size of the sound that had been used. These, after immersion for a few minutes in tepid water, were successively, in the course of ten days, introduced through the urethra, and there suffered to remain and expand by imbibing the moisture incident to the situation. The last of the number, expanding to a circumference exceeding thirteen lines, afforded space for the easy introduction and free use of a lithotritor (Heurteloup's) of a circumference of eleven lines.

The operation was commenced August 30th, in presence of Drs. Donne and Bayless. The first grasp of the lithotritor embraced a stone which the scale of the instrument indicated to be of the diameter of nine lines. This slipped from the instrument. A second stone measuring twelve lines, was seized and broken to pieces. Five fragments were afterwards grasped and crushed; this completed the first sitting. Within the succeeding twenty-four hours, a large quantity of calculous matter was discharged in powder and fragments.

September 2d. At this the second sitting, twelve fragments, of diameters varying from three to six lines, were crushed; which was followed by a copious discharge of calculi. The calculous substance discharged after these sittings, was of a reddish or Spanish-brown colour, hard, but of inferior gravity. Much of the matter (all of the powdered) was lost through the patient's want of skill in collecting it; the exact quantity is therefore not noted.

September 4th. Patient considers himself cured, having experienced no symptom of stone for two days; but a calculus is yet detected by the sound.

Third sitting. A stone of nine lines diameter was seized; it proved to be extremely solid, and difficult to break down. Eight subsequent crushes of fragments completed the sitting. Calculi to the amount of fifty-nine grains were discharged within the succeeding twenty-four hours; the largest fragment measured eight lines in length, and five in breadth,

from point to point of opposite angular projections. This produced some degree of irritation in the urethra, on account of which the next sitting was deferred to September 16th.

September 16th: fourth sitting. Sixteen fragments varying from three to six lines in diameter were crushed; seventy-seven grains of calculous matter were discharged within twenty-four hours thereafter. Since which, I have explored the bladder by various successive soundings, and on the 20th sounding was performed by Professor Gross, and by Mr. A. Martin, late house-surgeon at the Louisville Marine Hospital. No indication of any remaining calculi having been discovered, the patient was dismissed cured.

Mr. V. thinks he suffered no more pain during the process than he had ordinarily from the stone alone. He walked to my office, a distance of nearly a mile, to each sitting, and immediately after returned in the same way. He never lost a meal, nor was confined an hour, but considered himself as able to perform his ordinary avocations during the process as he ever had been.

October, 1843.

Selections from American and Foreign Journals.

On the Characters and Structural peculiarities of a Group of Morbid Growths in which Cancerous Affections are included. By Dr. Hodgkin.*—This paper was in continuation of a subject which had already been brought before the society on a former occasion by the same writer.

After describing the different appearances revealed by the improved microscopes of the present day, the author endeavoured to connect the nucleated cells, which Muller has shown to exist in these structures, with the production of those compound cysts which were described in the former paper, and pointed out as affording the type of the adventitious structure referred to.

The following are the conclusions which the author is desirous of drawing from the observations contained in the paper:

1st. The unrestricted confirmation of the views contained in the former paper as to the existence of the type of compound serous cysts in the adventitious structures referred to. The author had not only found it in man, but in several of the inferior species of mammalia, and in birds. Several able observers had, on examination, coincided with his views, and he mentioned the late Professor Delpech, and the present Professor Rokitanski, having personally informed him of their having, independently, been induced to adopt his views.

2d. That the microscopic examination of these tissues, though extremely interesting, does not furnish perfectly conclusive tests of any particular form of adventitious structure to which a specimen may belong, but that it demonstrates the application of the nucleated cell theory, whilst it is fatal to that of cancerous matter being formed in the blood and

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* Meetings of Royal, Medical, and Chirurgical Society.

eliminated at the spots at which the tumours become manifest. It therefore furnishes an important argument in favor of operation, though other practical considerations require to be attended to before operation is decided on.

3d. That to have a complete view of the mode of production of these structures, we must combine the cell theory of Schwann and Muller, the coagulation principle which the author had previously suggested, and the process of organization investigated by Mr. Kiernan—three stages of development which appear to occur in the order just enumerated; and that none of the phenomena, taken singly, is an adequate test of malignancy, which, as stated in his first paper, must be regarded as the sum of several characters.

4th. That chemical analysis, though extremely important and interesting, affords an imperfect and inadequate criterion, as the principles concerned may vary or be changed in the progress of development.

5th. That, in operating for the removal of a tumour of this class, it is extremely important to leave behind none of those minute cysts which often form granules in the surrounding cellular membrane, though it may appear in other respects perfectly healthy. This appears to be a mode of extension of the disease independent of inflammation.

6th. That experience teaches us that the infiltrated form of these diseases occurs in the structures in the neighborhood of the purely adventitious growth, when these structures have been the seat of inflammation, and that the chances of success from operation are consequently infinitely diminished when such surrounding inflammation has taken place. The presence of the peculiar matter of the disease in the interior of the vessels appears to be one of the modes in which infiltration, the result of inflammation, exhibits itself, and is, therefore, not a valid argument in favor of the pre-existence of such matter in the circulating blood.—*Bulletin Medical Sciences.*

Homœopathic Experiments. By Andral.—(From the Bulletin Generale Therapeutiqe, May, 1834.)—Andral, at the Hopital de la Pitié, has been putting to the test of experiment the homœopathic doctrine since November. These experiments are not yet concluded, but we shall give the results as far as they go, which are quite conclusive against the views of Hahnemann. Andral treated the patients submit-

ted to homœopathia strictly in accordance with Hahnemann's principles. The symptoms were combated by medicines, the special properties of which were pointed out by the German physician, and which, to insure the greatest exactness, were made up at the establishment of Guibourt, to which the homœopathic physicians send their patients. The regimen was carefully watched, and was altogether in accordance with that recommended by Hahnemann. It was composed of broth without salt or vegetables, of paps or of milk potages, and when the patients could eat, they were allowed bread and wine, meat which had served to make broth, and roast, rarely fish. Vegetables were never given to them, nor was any of their food seasoned. For drink they had sugar and water. During the treatment all external medication was interdicted. It is impossible, with all these precautions, not to have sufficient *data* to judge of the doctrine, especially when the facts are so numerous, and the physician so acute. The facts were collected with the most minute attention by Mr. Vernois, one of the *internes*.

In 54 applications of the homœopathic treatment, 8 patients alone derived any benefit, which continued without the use of any other plan of treatment, and 46 were as bad some days after the administration of the globules as before. It ought, however, to be mentioned that the state of 7 of them was slightly ameliorated on the morning after they took the medicine. But what were these cases? The first was a case of intercurrent pain, which had existed for some days; the second was a case of *angina;* the third, one of rheumatic pains; the fourth, intercurrent cephalalgia in a phthisical patient; the fifth was a case of stunning in a man subject to cerebral congestion; the sixth, a case of diarrhœa following constipation; the seventh, one of rheumatism at the 18th day; and eighth, a case of slight pain, which came on during chronic *gastro-enteritis*.

The medicines employed by Andral, were *aconitum*, *arnica*, *belladonna*, briony, camphor, camomile, *colchicum*, *ipecacuanha*, *hyoscyamus*, *opium*, soluble mercury, *nux vomica*, metallic lead, *pulsatilla nigricans*, and tin.

From the month of January, Andral treated 35 patients on homœopathic principles. Of these, 18 were men, and 17 women. Five were submitted to the *aconitum*, four to the *arnica*, five to *belladonna*, five to bryony, one to camomile, three to colchicum, three to hyoscyamus, one to opium, two to soluble mercury, three to *nux vomica*, one to lead, and two to the *pulsatilla nigricans*. We throw the results, &c.,

into a table. [Here follow 35 cases, with the names of the substances used, the diseases, predominant symptoms, effects, &c., in none of which, save five, was there any relief.] From the above facts, it would appear that the homœopathic plan of treating diseases is totally inert, and can be useful only as a *placebo* to hypochondriacs and nervous women, by relieving them from swallowing the manifold drugs with which they think it their duty to burden their stomachs.—*Bost. Med. and Surg. Jour.*, from *Edin. Med. and Surg. Jour.*

New Mode of Accelerating Labour. By Samuel Staniland.—Being a midwifery pupil of Dr. Blundell, I of course carried his valuable instructions with me into practice, and one (not the least—viz., that "meddlesome midwifery is bad") had much influence on my conduct when called to attend the parturient female. At first the unnecessary calls which were made for my attendance, and the frequently slow progress of labour in others, where the true expulsatory efforts had commenced, together with the circumstance of being urged, on various occasions, to assist labour if possible, made me reflect upon the nature of the physiological action of the uterus, and the expulsatory action of the abdominal muscles. Much thought on the subject, connected with the latter action on the rectum, bladder, stomach, and lungs, when irritating substances need expulsion, led me to the consideration of the process of labour, which appeared to me to be an analogous action, and I at length found the principle of imitation of the natural stimulant power, which I have now for ten years carried into very successful operation, not only with a saving of much suffering to the patient, but an immense saving of time to myself.

When I first practised it, I was not so conversant with the physiology of the animal economy (except by book and school knowledge) as at present; yet, having studied Nature's designs in her various sympathies, the principle of excitation and reflex influences came to my assistance, and taught me that as the bladder, when distended with urine, and the rectum distended with fæces, call upon the abdominal muscles to expel their contents, so would an excitement, similar to that of the head of the child, or the unbroken membranes on the vagina in their passage, promote, under proper circumstances, the natural efforts, and lead to a more speedy and equally safe labor.

The principle being given, what is the practice, and under what circumstances should the operation be performed?—for I desire never to forget Dr. Blundell's valuable maxim.

The practice consists simply in imitating the influence of the child's head or membranes on the natural passages, and thus producing a reflex and wholesome contraction of the abdominal muscles (I say nothing of the independent action of the uterus) by introducing the forefinger, or fore and second fingers, as far as the point of the os coccygis, and passing them along the whole surface downwards of the vagina, so as to give the sensation of distension, not pain, just enough to excite the required action, and give new and more vigorous impulse, even after hot fluids, stimulants, ergot, &c., have been tried in vain.

What are the circumstances, then, which warrant its application?

1. In cases of first labour, where the os uteri is fairly dilated, the head of the child has been in the passage from eighteen to twenty-fours, the patient much fatigued, and the pains, without assistance, comparatively ineffectual, the womb acting.

2. In cases after the first child, where the passages are rather confined, or the head of the child unyielding, although in the passage, and the natural efforts unavailing, especially when warm fluids and stimulants have been tried without benefit.

3. Where there is much rigidity of the perineum, on which the head rests, but the natural efforts either greatly exhausted or the perineum unyielding; the practice here serves two purposes,—viz., dilatation and stimulation.

Lastly. Where the womb and abdominal muscles, after a severe labor, sink into a collapsed state, and are indisposed to do more work, and the placenta, though in the upper part of the passage, does not excite the abdominal muscles to action. With this principle at my command, I have never seen such a thing as the old retained placenta in any form, and much doubt whether, with it, I ever shall.

There are other minor circumstances which it will be necessary to apply, but the observant practitioner will readily find them out when conversant with the application of the principle, and the above will be sufficient to guide him in most cases. If, however, with these directions, there should be any doubt on his mind, I would say, rather wait the result of the old practice than urge assistance when unnecessary or "meddlesome."

I shall feel much pleasure in hearing from any gentleman, either personally or through your Journal, the results of their practice, and the more so if they will favor us with new aphorisms for its general application.

Dr. Marshall Hall will at once perceive in this principle a practical application or illustration of the excito-motory nervous sensation; but it was not in consequence of his suggestion that the principle was applied by me, but after a study of the great sympathetic nerve, for I had practised it nearly five years before I read his excellent work.—*Med. Examiner*, from *Provincial Med. and Surg. Journ*, March, 26th, 1842.

Examination of the Eye in Disease.—In the diagnosis of ophthalmic disease, accurate examination of the affected organs is almost always of the utmost importance, and as this cannot often be effected unless the practitioner proceeds with extreme delicacy and skill, a few remarks on the subject may not be misplaced here. However well versed in general practice, if a man be not accustomed to examine diseased eyes, he is almost sure to defeat his own object by his manner of conducting the examination; and if this be the case with the well-informed, we can imagine the awkwardness, violence, and absurd manner of the ignorant. Mr. Middlemore (Treatise on the Eye, vol. i., p. 88–9), mentions that in a case of extraction, nine days after the operation it had proceeded so favorably that few would have judged any operation had been done, unless attention had been expressly directed to the circumstance, but happening to show this case to a surgeon from the country, he handled the eye so roughly as to cause great pain, followed by very severe ophthalmia. Beside unnecessary roughness and violence, inexperienced persons are apt to place patients in the direct glare of light from a window, &c., and to be extremely awkward in managing the lids, pressing on the eyeball instead of gently raising or depressing the upper and lower eyelids.

It is the best plan to gain all the information possible, by carefully inspecting the outside of the lids, their edges and angles, and the exposed parts of the eyeball, before we touch the eye at all; for in this manner we often gain very valuable hints, and can often see the eye, where there is much intolerance of light, when it would be difficult or impossible to do so in any other manner. In strumous ophthalmia for exam-

ple, we can often catch a fair glimpse of the front of the eye when the child is looking over its nurse's shoulder, quite unsuspicious of any examination going on, or in the affections of adults, while conversing with them on some other topic. In all diseases attended with intolerance of light the patient should not be exposed to a direct or very powerful glare, but be so situated as to enable the practitioner to see clearly, and to throw an oblique light on the organ to be examined.

In the great majority of instances it is necessary to separate the lids, and in some cases to evert them. As in all other operations there are right and wrong methods of proceeding. "It may seem absurd," says Mr. Morgan (Lectures on Diseases of the Eye, p. 24), "to suppose that any medical man in his senses would throw a stimulating injection into the eye as a preparatory step to separating the lids, and obtaining in that way a view of the inflamed globe. Yet many are producing now and then the very same effect as that which would result from such a proceeding by different means. This effect is occasioned by the manner in which many a novice is in the habit of opening an inflamed eye." Mr. Morgan gives plates of the usual modes in which bunglers make the attempt; in the first each thumb is placed on the tarsal cartilages, pressing with force on the globe, and rubbing the inflamed surfaces together; in the second, elongated finger-nails are insinuated between the lid and globe, and the inflamed surfaces clawed asunder.

The proper plan of *separating* the lids, in all ordinary cases, is to raise the upper lid first, and in some cases to depress the lower subsequently, by placing the thumb horizontally below the eyebrow, taking care that its lower edge is not placed as far down as the tarsal cartilage, and drawing the lid upwards by the external skin, by which means thus it is raised and separated from the globe, preventing the inflamed surfaces rubbing over one another, and all pressure on the eye itself. In depressing the lower lid the point of a forefinger and thumb should be placed vertically about its centre, below the tarsal cartilages, and the lid drawn down and slightly everted by its integument. I have found this plan of proceeding better than raising the upper and depressing the lower lid at one and the same time.

When much swelling of the conjunctiva and lids are present, the foregoing plan may either cause inversion of the lids, or prove quite inadequate to expose the globe. Under these circumstances it may be necessary to act differently in raising the upper lid; the extremity of the finger or thumb must

be brought vertically to the centre of the tarsal cartilage, the edge of the nail being below its margin, and beneath the eyelashes (not hooked between the lid and globe), and in this manner the cartilage is to be pushed upwards towards the edge of the orbit, raising the lid slightly from the conjunctiva oculi, and making no pressure on the eyeball.

A third plan may be necessary in children, viz., the forcible separation of the lids. The child should be seated in the nurse's lap with its back towards the practitioner, who then lowers the head and places it firmly between his knees, so as completely to steady it, whilst the nurse keeps the arms, body, and legs as still as may be, for the child often struggles most violently.

As a general rule, we should not attempt to examine the eyes of children whilst they are crying, or resisting powerfully, but an opportunity should be taken of quickly and easily raising the upper lid, either whilst they are asleep, or are quiet and unsuspecting. It is only in older children who cannot be thus treated that forcible separation becomes necessary. Dexterity and adroitness are only to be acquired, however, by a little experience and observation, which the intelligent student will soon gain.

The best plan of separating the eyelids in many operations on the eye is to place the extremity of one or more fingers on the tarsal part of the lids, bringing the edge of the nails against their margins, and carrying the lids in this position against the orbital edges. In this way the lids are raised slightly from the globe, and therefore no pressure can be made on it, whilst the eyeball is fully exposed without inducing any irritation.

To *evert the lids* nothing more is requisite than to place a probe horizontally across them, above the tarsal cartilages, and to press downwards with a gentle force, whilst the edges of the lids are drawn upwards by the lashes. Where we merely wish to inspect the conjunctiva of the lid, without inverting it, we can do so by lifting it off from the globe by the cilia, and holding it at a moderate distance; in the lower lid it is sufficiently exposed by merely drawing downwards by the integument. An eye should not be exposed for too long a period, nor too frequently examined, especially after an accurate view has been already obtained.

In many diseases, especially those of an amaurotic character, we wish to ascertain if the globe be either morbidly tense, flaccid, or healthy; to do this the patient closes the lids, and we examine, by the touch, its degree of resistance, placing

the thumb on one, and the forefinger on the other lid, and comparing the state of the two globes with one another, and with that of an healthy organ.

In those diseases of the eye which affect the more superficial parts the observer should look not only at the organ directly, but also with some degree of obliquity; for, frequently, ulcers of the cornea appear as mere opacities if we directly face the patient, but viewed obliquely, the breach of surface is readily apparent. So, also, if we look directly at the cornea, it is difficult to tell whether the capsule of the aqueous membrane or the cornea itself be cloudy, but no such difficulty exists if we view these parts obliquely.

In ordinary cases it is not necessary to *close one eye* whilst we examine the other; but in all cases of suspected amaurosis we should direct the patient to do so, and cover the organ with his hand; for it is necessary to recollect the physiological fact, that if one eye be sound the iris of the blind eye will move, in some degree, in accordance, with the motions of the sound pupil. In all these cases the pupil of the amaurotic eye will dilate if the sound eye be closed, becoming dilated to its full extent if the light be still further obstructed by placing the hand over the eyelids of the closed eye. Again, where we have a case of simple imperfection of vision, with a dilated pupil and an absence of the ordinary constitutional and local symptoms of amaurosis, it is well to make the patient look through a small clean aperture in a card, in order to distinguish mere en'argement of the pupil from nervous imperfection of vision.

In all the deeper-seated diseases of the eye. attended by cloudiness of the humours, the eye should be examined whilst the pupil is dilated from the influence of belladonna; placing the patient in a good light, and looking towards the bottom of the eye both directly and obliquely. It is in these cases that what has been termed the catoptrical examination of the eye (this method was first discovered by Purkinje, of Breslaw, but came into general use from a clinical lecture by Sanson) is so useful. It is thus conducted:—

The pupil being dilated by belladonna, a lighted taper is to be held at a short distance from the eye, in front of the pupil, moving it slowly from side to side. The flame should burn steadily, or, in some cases, we shall find the bright wick of a candle, the flame of which has been blown out, most useful. Under these circumstances we observe three reflected images of the light in a sound eye, or in an eye where the the cornea, lens, and its capsule, retain their transparency

and brilliancy. Of these, two—the anterior and posterior—are erect, whilst the centre one is inverted. The erect images follow the motions of the candle, but the middle inverted image, which is smaller, duller, and less distinct than the others, moves in the contrary direction. In fact, unless we move the light steadily from side to side, it is difficult to see the centre inverted image at all. The anterior erect image is a reflection from the cornea, the posterior one (erect) is from the anterior surface of the capsule of the lens, and the middle or inverted image, a reflection from the concave or posterior surface of the chrystalline capsule. The anterior one is always seen as long as the cornea remains in a healthy condition; the posterior erect and the middle inverted images are lost if the anterior surface of the capsule or the lens itself be opake, whilst only the middle inverted one disappears, provided the posterior capsule alone be effected. The inverted and the deep erect images are very speedily obscured and then obliterated by lenticular cataract, whilst the images are unaffected in simple amaurosis. In making this examination the practitioner should face the light, and look downwards and backwards at the eye of the patient, who should be seated with his back to the light.—*Hocken* in *London Lancet.* August 12, 1843.

Remarks on some forms of Abdominal Neuralgia depending on Uterine Irritation. By Golding Bird, A.M., M.D., F.L.S., &c.—[It seems to be more and more the opinion of the profession that we are only half acquainted with those "protean host of maladies or rather symptoms simulating every form of inflammatory affection occurring in women, from the period of the first developement of the uterine functions to the time of their cessation." How many women have been bled and blistered for pleuritis and other supposed inflammatory affections, or confined for months on couches, and gone through the ordeal of blisters, leeches, and moxa, when the uterus was the real organ affected, and clearly produced those distant neuralgic symptoms. When we know how the unimpregnated womb, when in a state of irritation, exercises its influence on distant organs, we need not be surprised that this is much more the case when that organ has been lately undergoing immense changes from impregnation; and also when delivery has been accomplished, and it is gradually re-assuming its former size and functions. "Accord-

ingly, at a time varying from a few hours to a few weeks after parturition or miscarriage, we occasionally find excessive irritation of the uterus, attended with intense neuralgic pain over the abdomen, and a suppression of the lochial discharge manifested, producing a disordered state of every function of the body, giving origin to a set of symptoms often mistaken for puerperal fever and peritonitis." Dr. Bird relates a good case of this kind. Susan Haws, aged 29, was admitted under his care at the Finsbury Dispensary. She had always been ailing since menstruation commenced, and worse since marriage; she had pains in the hip and loins as well as over the pubes, darting to the back and extending to the left breast and between the shoulders, with excessive low spirits and fits of an hysteric character.]

"All these symptoms are always much more intense when the catamenia appear. For the last two years she has been troubled with excessive leucorrhœal discharge. Two days before she became my patient, she was seized with a fit of an epileptic character, she being then at the termination of a third pregnancy. For this she was bled copiously, and a few hours aftewards was delivered of a healthy child. During the last few months of utero-gestation, she had been subject to diarrhœa, and the genital organs had been so irritable, that sexual intercourse was attended with excessive pain, and was always followed by an increase of the leucorrhœal discharge, and of the pains above described. After her labor. the lochiæ became copious, her milk abundant, and she appeared well until forty-eight hours had elapsed, when she came under my care for an attack, as it was stated, of peritonitis. I found her lying in bed on her back, with her legs drawn up; her abdomen tumid, and so exquisitely tender that the slightest touch produced the most intense pain; her features were contracted, and presented an aspect of the utmost anxiety; her eyes were suffused; her tongue white, but moist; her pulse 100, small, but jerking; the urine was very scanty, and nearly brown from its extreme concentration. The woman did not lie still and quiet, but kept tossing about from side to side uttering loud and incoherent screams; she threw her arms wildly over her head, and seemed scarcely conscious of any thing around her, until an attempt was made to touch, *or even approach* the abdomen, when she shrunk back and cried out in an incoherent manner. I found that she had not slept the whole night from excessive rigors, which had continued nearly without intermission for eight hours, and that these were followed by heat and sweating and had terminated in the attack

I witnessed. The abdominal pain appeared to be most intense about the pubic region and over the cœcum, and to become more severe every five or ten minutes, never however entirely ceasing.

The practitioner who had been called to this patient early in the morning before I saw her, had covered the abdomen with leeches, as her friends resolutely refused allowing her to be bled from the arm, and had given a large dose of calomel; the pain had, however, become much more severe, and the paroxysms more frequent since its administration. The lochiæ had ceased in the course of the night, and the bowels had been once opened during the previous twenty-four hours.

℞. Hydrarg. c. Creta. gr. iv. statim; Olei Ricini. ℥vj. post horam; Opii puri, gr. j.

Antim. Tart. gr. 4, Misce. Ft. pilul, nocte maneque cap. And a large bran-bag fomentation was ordered to be applied to the abdomen as hot as it could be borne, and continued during the day. She was ordered to take mutton-broth and gruel *ad libitum.*

Feb. 19. A scanty show of the lochiæ has appeared in the night; bowels freely open; dejections dark, fœtid, and containing scybalæ; she had had some sleep in the night; tongue white but moist; pulse 100, small and compressible; abdomen exquisitely tender on pressure, but the paroxysms of pain are less frequent, although still severe; she still utters loud cries on the slightest pressure being applied to the abdomen; she has passed no water, and not above an ounce of turbid, dark urine was removed by the catheter; the surface is still hot, but much moister; the bran-bags have been kept constantly applied. Rep. Ol. Ricini, pilulæ, et fotus.

20th. Has passed an excellent night; bowels freely open, with much dark, fœtid, and somewhat scybalous matter; no fresh rigors; lochiæ copious; abdominal tenderness less; the paroxysms of pain have nearly ceased; urine abundant. Rep. pilulæ et fotus.

She continued mending until the 25th, when she was reported convalescent; still, however, having an irritable condition of the uterus left, as shown by pains about the loins, hips, and pubes. On March 14th, she again became my patient for what was stated to be pleurisy, ushered in by intense rigors, followed by heat and sweating. I found her lying in bed on the left side, breathing with extreme difficulty, every respiration being accompanied by a cry of pain; she referred

her suffering to a space under the left breast extending to the margin of the ribs. On attempting to turn her in bed, she declared the pain and difficulty of breathing to be insufferable. On examining her chest I could not detect any lesion. Her pulse was 100, small, and rather jerking; pressure over the uterus produced intense pain; her bowels had been constipated for two days, and the leucorrhœal discharge was profuse.

℞. Ol. Ricini. f. ℥j c. T. Opii *m*xx. statim.—Opii, gr. j. Antim. Tart. gr. ¼, ter die.

15th. Numerous scybalous masses were brought away by the oil; she had passed a good night, and had perspired copiously; the pain had nearly ceased. Some wine and porter were allowed her, and she became in a few days once more convalescent. On the 30th March, she walked to my house, apparently well, complaining, however, of a dull pain shooting down the left leg, causing her to draw the limb after her in walking; the leucorrhœal discharge, and the symptoms of irritable uterus still continue. She attributed the pain of the leg to sexual intercourse which had produced such excessive pain, that she fainted.

In this case we have an example of a woman whose nervous system has been from the commencement of menstruation always more or less deranged from an irritable state of the uterus, and its attendant, hysteric epilepsy. The abundant leucorrhœal discharge, even during pregnancy, sufficiently attests the deranged state of the uterine functions. On labour commencing, we find this state reacts on the cerebro-spinal system, and a formidable apoplectic fit, attended with complete unconsciousness, is the result. The labour terminates, she commences suckling her child, and forty-eight hours scarcely elapse ere the peculiar set of symptoms indicative of intense uterine irritation supervene. The suppression of the lochiæ and urine, her position in bed, the pulse, state of the tongue, skin, and abdominal tenderness, all preceded by rigors, would appear to indicate that much dreaded disease, puerperal peritonitis; but the incoherent screams, the wild and unmeaning expression of countenance, the tossing of her arms, and the constant shifting of her position in bed, as well as the crying out, on the mere approach of the hand to the abdomen, and the pain occurring in paroxysms, pointed out, on the other hand, the existence of excessive irritation, and unmasked the true character of the disease. The result of the treatment fully justified the diagnosis. But scarcely had

a fortnight elapsed from the time of her convalescence, when, after two days' constipation, rigors again came on, the uterine discharge then ceases, and all the general symptoms of an intense pleurisy appear. Again, a comparison of the symptoms presented by the patient, and an examination of the chest by auscultation, develope the nature of the ailment, and the woman is again relieved. She walks about, performs her ordinary domestic duties, still having severe lumbar and pelvic pains, when a pseudo-paralysis of the left leg, following a direct irritation being applied to the uterus, makes its appearance, all pointing out the internal irritable condition of that organ, and justifying our regarding it as the predisposing cause of the various attacks suffered by this patient after parturition.

I am quite aware that cases of this kind would be by many regarded as essentially arising from intestinal irritation, and would consequently be classed with those interesting cases of head affection described by Dr. M. Hall, as produced by that cause, and so frequently occurring in the puerperal stools. By others, again, these maladies would be, and have been, traced to a strictly constitutional origin. But with regard to the first view, viz., that puerperal neuralgia arises from intestinal irritation, I would remark, that we have equal evidence of the derangement of every function in the body; the secretions of the skin and kidney are in most instances deficient, those of the liver and mucous surfaces are always more or less vitiated, and the bowels, although often constipated, are occasionally acting too energetically, or in some cases are tolerably regular; but the uterine functions are, so far as I have seen, invariably affected, the secretion being either entirely arrested, or becoming very fœtid and viscid, and as one or other of these states always occurs, it is fair to regard them as the essential predisposing causes to the production of the neuralgic state under consideration. Can it be supposed, I would ask, that two days' constipation would alone be adequate to the production of so severe a set of symptoms as we find manifested in the first case detailed in this paper, providing some other important source of irritation had not been exerting its influence upon the patient? Is it, indeed, reasonable to suppose that a slight constipation, a symptom of such frequent occurrence during the puerperal state could develope so serious a train of symptoms, unless some other function was so manifestly imperfect as to produce a generally irritable condition of the nervous system, and thereby rendering the body obnoxious to attacks of disease from ex-

citing causes, which, in the ordinary state, and when free from such depressing influences, would be almost without action upon it? I regard the depressed state of the nervous system produced by the irritable condition of the womb as the predisposing cause of these attacks, and any slightly deranged function, whether of the skin, liver, or bowels, will act as an exciting cause upon such a deranged state of the system, and develope in full force the severe neuralgic attacks under consideration.

With regard to the diagnosis of these neuralgic affections, the comparison of the different symptoms presented by the patient will generally be the best guide of the practitioner. Every symptom of genuine peritonitis may be present in these attacks, but not at the same time; again, the accession of the pain in paroxysms, the screaming out, *ere the hand is in contact with the abdomen*, or when it has barely touched the parietes; the fact of our often being able to apply considerable pressure without pain when the patient's attention is arrested by a sudden exclamation, an abrupt query, or her infant's cries, will generally enable the physician to detect the true nature of the disease. The excessive depression of spirits, and often the strange and groundless delusions of the patient, the accession of an occasional hysteric convulsion, will also assist in forming a correct diagnosis, a task at all times of no small difficulty in these cases.—*Braithwaite's Retrospect*, from *Lond. and Edin. Month. Jour. of Med. Sci.*, Jan. 1843, p. 31.

The Medical Profession.—At a period of political excitement, when the minds of men are sharpened against each other by ever-recurring subjects of contention; when intolerance and proscription usurp the name of patriotism, and individual opinion is borne down and trampled upon by irresponsible masses, under some banner of party; when private friendships are violated and public confidence lost, it is cheering to behold a band of intelligent and honorable men uniting together in the peace and dignity of reason, for no sinister motive, but for the promotion of individual friendships and general harmony and benevolence.

"It was a fortunate idea, and reflects credit upon those who instituted and organized this society, that a nearer association and personal acquaintance among its learned members could but result favorably in producing and enhancing mutual

confidence and esteem, while it would impart fresh zest to the pursuit of science.

"Similitude of interests and pursuits seems calculated to assimilate and bind together the enlightened and noble, and a generous rivalry but serves to enhance the ardor and enthusiasm of research. *Nil actum reputans, si quid superesset agendum.*

The medical profession, above all secular avocations, should most elevate and refine the mind, while it frees the heart from dross. Bringing its votary into immediate acquaintance with the secrets of the physical world, and not less so with the intricacies of the moral, it stamps him as the Priest of Nature.

"The physician stands upon a pedestal of exalted science, which should enable him to see beyond the conflicts of other men. Calm in reason and self-possessed, with a mind stored with virtue and religious contemplation, he is at once recognised as the friend of man and one of the noblest works of Deity.

"A generous and trusted friend in health, he becomes, in seasons of sickness, distress, and danger, a minister of mercy. True to himself, he has stored his mind with useful and varied knowledge, and now stands ready, with prompt alacrity and steady skill, to relieve or mitigate. Who has not felt, who can adequately appreciate the deep anxiety of the sufferer or still more suffering friends? The parent, wife, or child hangs with deepest solicitude upon his every look and slightest word. He is grave, and all is careful anxiety; he smiles, and cheerfulness returns with joy and buoyant hope.

"This is no 'fancy sketch' or dream of enthusiasm; the trail of the serpent is over the fairest flowers of human existence, and none are more frequently called upon to witness its withering blight.

"Nor is the benign influence of this noble profession bounded by States, Kingdoms, or parallels of latitude. Its reign is universal. Civilization confesses the obligation, and savage man looks on with wonder and veneration.

"Wherever the human race is found are its humanities represented, and ever and always ready to offer the balm and wine and oil of efficient sympathy, to console and assuage the distresses of our fellow-creatures.

"Well may we congratulate ourselves while surveying this brilliant field of our labors, more glorious than that of the 'cloth of gold;' and well may we exult in the words of the great Epic, '*Quæ regio in terris nostri non plena laboris.*'

"Gentlemen, we shall not detain you by a history of our profession, though it is ever gratifying to dwell upon the long list of mighty names which have in all times adorned its annals. These men and their deeds should be familiar to us as household words; and it only remains for us to imitate while we admire their virtues and their labors.

"Allow us, in conclusion, 'brethren of the mystic tie,' to assure you a cordial and honorable participation in the labors and privileges of the society; and while extending the right hand of fellowship, to wish you, all and each, in all sincerity, health and fraternity."—From *Dr. Page's Address* to the *Albemarle Med. and Philos. Society of North Carolina.*

Treatment of Chancre.—There are few surgeons better acquainted with the nature and treatment of syphilis than Mr. Langston Parker, of Birmingham, and we may therefore safely recommend his mode of treating a chancre. Instead of using the nitrate of silver either solid or in solution, so as to covert the specific ulcer into a common one, (which may be done when used very early), he prefers using a much more powerful escharotic, so as at once to disorganize the tissue to a depth coequal with that of the chancre. This the nitrate of silver does not always accomplish; it often, on the other hand, converts the sore into a very irritable one, without destroying its specific character. By using a more powerful escharotic, this is more safely and certainly done; and for this purpose, highly concentrated nitric acid, the acid nitrate of mercury, the acid nitrate of silver, or the potassa cum calce of the London Pharmacopœia may be used. The second of these remedies is made by dissolving a drachm of the subnitrate of mercury in an ounce of nitric acid; the third by dissolving the same quantity of the nitrate of silver in the like quantity of acid; but Mr. Parker prefers the potassa cum calce, which is to be made into a paste of moderate consistency with spirits of wine, at the time it is wanted for use, and the sore and its edges covered with it; it may remain on from half to a minute, or even longer according to its effects. After this the caustic must be all removed by means of a fine bone spatula, and the eschar left may be covered with a poultice or any other simple application. All the parts touched by this application are at once destroyed, and on the separation of the eschar we find a clean granulating sore left. We must refer to Mr. Parker's paper for his re-

marks on the constitutional treatment of syphilis, but we will here shortly advert to his method of treating a bubo which we think equally judicious as his mode of destroying a chancre. If a bubo is forming, insist upon a strict regimen and absolute rest, if possible; smear the part over with mercurial ointment, over this a cold linseed poultice and a piece of oiled silk to keep it moist, confining all by a bandage. The best way, however, is to paint over the enlarged gland, night and morning, with a strong solution of iodine and hydriodate of potass; one scruple of iodine, two scruples of hydriodate of potass, and one of water. Pressure and a slight mercurial course will hasten its dispersion. If suppuration takes place, how is the abscess to be opened—not by a free incision as is commonly done, but by several very small punctures with a lancet over the thinnest part; through these the matter oozes till the cavity is empty, and a weak solution of the sulphate of zinc is then to be injected, of the strength of two or three grains to the half-pint of water. When the abscess is quite empty place a large compress over it. A weak solution of iodine may occasionally be substituted for the zinc in the following proportions: Iodine four grains, hydriodate of potass eight grains, water eight ounces. Mr. Parker thinks that the same method may be extended to the treatment of chronic abscesses.

Dr. Strohl differs materially from Mr. Parker in his treatment of chancre, and although we give his peculiar way of treating these sores, we must say that in the specific cases of syphilis we should not depend upon it. He assures us that his local treatment of chancre is one of the most successful yet practised. It consists in cauterizing the sore if it is not much inflamed nor extensive. If it is so, he employs sulphate of copper instead, and dresses the part five or six times a-day with charpie soaked in a solution of about a grain and a half of sulphate of copper to an ounce of water. The sores will generally heal in about twelve days. At other times he uses an ointment composed of two grains of cyanuret of mercury to an ounce of axunge. This ointment is spread upon a piece of linen corresponding to the size of the sore. When this is too painful, it must be taken off for a time and replaced in a weaker form. When it has been on from four to ten hours, it is dressed with mercurial ointment, or opium cerate.—*Braithwaite's Retrospect of Prac. Med. and Surg.*

On the Difference of the Respiratory Movements at Different Ages, etc.—We are not aware that the phenomena, to which Beau and Maissiat allude in the following remarks, have been sufficiently dwelt upon in any of the recent works on physiology; and yet they are of that practical importance as to merit the attentive consideration of all medical men. The gist of their observations is that the type of the respiratory movements, or, in other words, the manner in which these are performed, varies not a little in the two sexes, and also at the different periods of life. The following abstract of their elaborate memoir will enable our readers to judge of its contents.

They describe what they call three distinct types of the respiratory movements, viz: 1, the abdominal type; 2, the inferior costal type; and 3, the superior costal type. In the *first*, the cavity of the chest is increased during inspiration, chiefly by the descent of the diaphragm and the protrusion of the abdominal muscles, the ribs being nearly motionless;—in the *second* by the elevation and expansion of the lower six ribs, the movement of the upper ones becoming less and less considerable as we ascend, till it ceases altogether in the second and first;—and in the *third* chiefly by the elevation and expansion of the upper ribs, the movement becoming less and less marked as we descend, till it nearly ceases entirely in the lowermost. In the second variety, the lower half of the sternum is much more moved, *i. e.*, elevated and depressed, than its upper half; while the reverse of this is the case in the third variety.

In the majority of cases, each individual has, what may be called, his peculiar type of respiratory movements; and this seems to be remarkably constant at all times. One person breathes chiefly by the abdomen, as to speak; another by the lower ribs; and a third by the upper ones. A good deal however depends on age, and not a little on sex also, as we shall now endeavour to explain.

In the early period of life, and often indeed until three or four years of age, the respiration usually exhibits the abdominal type: the ribs are scarcely moved at all; and when the breathing is very much oppressed, as in many cases of pneumonia, the cartilages of the lower ribs are observed to be drawn somewhat inwards during each act of inspiration.

After this period of life, the three types begin to be marked in a more or less distinct manner, according to the individual's sex and constitution. The superior costal type is ob-

served particularly in girls; while the other two types are found in nearly eqal frequency, in boys. As a person advances in life, we find that the first-mentioned type becomes more and more predominant in females; and one one of the latter types more and more so in males.

The superior costal type in the female sex is readily recognisable not only in our hospitals, but in any assemblies of women, and more especially in actresses on the stage. Who has not observed that the upper part of the thorax, including the sternum and clavicle, is often, during the representation of strong mental emotions, most strikingly elevated and depressed? Nothing at all similar is ever witnessed in male performers. It may be supposed that this peculiarity in women is in some degree induced by the wearing of stays and the consequent compression of the abdomen and the lower part of the chest. But, although this absurd and most pernicious custom* may unquestionably increase the degree or amount of the peculiarity in question, it certainly does not give rise to it; for we find it to exist in girls before they ever wore stays, and in countrywomen who never wear them at all.†

One important end gained by the respiration being superior-costal in the female sex is abundantly obvious—the breathing is thus much less disturbed than it otherwise would be during the period of pregnancy. This point, although seldom or never alluded to in modern lectures or writings, has not escaped the attention of some of the older physiologists. Boehaave, in his Prælectiones, thus makes mention of it: "Hinc in fæminis inspirantibus sternum rursum et oblique extrorsum vertitur, totusque thorax quasi assurgit; hinc etiam tumente abdomine, liberius respirant." Haller, the great commentator of Boerhaave, is still more exact and minute in his description of the peculiarities of the respiratory movements in the two sexes: "Considerate puerum anni unius et puellam ejusdem ætatis in eodem lecto unâ dormientis, videbis

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* To do all manner of justice to the ladies, we must frankly admit that our authors are by no means so much opposed to the use of corsets as most medical men are. "We may here state *en passant*," they say, "that the use of the corset is not nearly so hurtful to females, as is generally imagined. Indeed it may almost be asserted that they are, so to speak, organised for the wearing of this piece of dress (!) On the other hand, it is an absolute physiological absurdity, (*contresens*), for men to wear stays; for their breathing is chiefly by the lower ribs and the abdomen."

† The eye is no guide in this matter, deceived as it must be, by the heaving of the mammæ, and the contiguous cellular and adipose tissues in the female, by which the movements of the chest are more visible than in the male sex; but it does not follow that they are really more active.—Ed. Bull. Med. Science.

in puella, quando inspirat, totam thoracis molem ascendere versus jugulum; in puero verò inspirante thoracem et claviculus vix moveri. In viro adulto pectus vix movetur equidquam, dum respirat; in fæminâ totum sursum trahitur, ut â diaphragmate recedat. Ergo vir abdomine maxime respirat, fæmina thorace. Nisi hanc fæmina diversitatem natura fecisset, gravidæ perpetuâ dyspnœâ laboravissant æque ac viri hydropici."

It would seem that most of the authors of the present day have quite overlooked these interesting peculiarities in the phenomena of the respiratory movements, so well described almost a century ago. It has been generally supposed that the movements are nearly alike in all persons; and hence one of the chief objects of inquiry among modern physiologists has been to determine the *where* and in what direction the principal enlargement of the chest takes place. We cannot therefore be surprised at the difference of opinion on this point. While Gerdy maintains that the greatest enlargement of the thoracic cavity occurs in a transverse direction on the level of the lower ribs, we find Hourmann and Dechambre infer from their observations—on the old female inmates of the Salpetriere hospital—that it is in the upper part of the chest, and that, "in this general movement of ascension, the sternum is, on an average, raised from eight to twelve lines." And what is the general conclusion to which they come? That "in proportion as a person advances in years, the motory powers of respiration—and more especially those which tend to increase the transverse dimensions of the chest—become considerably impaired in their energy." It is scarcely necessary to say that the mode of respiration, described by these gentlemen, is not the result of age, but is natural to the female sex. It is however much more conspicuous in young than in old women.

Beau and Maissiat proceed to notice the peculiarities of the respiratory movements in different animals; for the type, so to speak, is far from being alike in all. In the rabbit, the horse, the cat, &c., it is chiefly abdominal; while in the dog, it is inferior costal in a very marked degree. In no animal is it superior costal, at least in the natural and healthy condition; and perhaps for this reason that the alternate elevation and depression of the upper ribs and of the sternum would have interfered not a little with the movements of the fore legs in running. This mode of respiration may therefore be regarded as peculiar to the human race, and more especially

to the female sex.—*Bulletin Med. Sci.*, from *Encyclographie des Sciences Medicales.*

Continental Treatment of Neuralgia.—Dr. Schleiser, of Peitz, has prescribed, with success, to patients with abdominal neuralgia, but whose circumstances would not permit of their visiting any watering-place, the use of an artificial mineral water, resembling that of Eger, in Bohemia, and made as follows:—*R. Filtered spring-water*, a pint; *diluted sulphuric acid*, two drachms and a half; *hydrochloric acid*, twenty drops. Mix, and add *bicarbonate of soda*, forty-five grains. The bottles are then to be sealed up without delay, and kept cool; one or two pints may be drunk daily. In hepatic neuralgia, Dr. Schleiser depends much on the effects of belladonna; in cases where great irritability of the stomach is present, he finds nitrate of silver suitable, combined with morphia.

Rust's Magazin.

Morphia has been an ordinary remedy for neuralgia, the cure of which it may, in certain cases, effect; but a French practitioner, Rougier, has advised the adoption of an ingenious method, which he says will prove the completeness and permanance of the cure. After the apparent removal of the disease by the morphia, he administers successive small doses of strychnia, gradually increasing the amount of the doses and abridging the intervals between them. Now, if the cure have been complete, the tremors and other characteristic effects of the strychnia go on diminishing in intensity from the first, notwithstanding the increasing strength and frequency of the doses; but if otherwise a contrary result happens, and the effects of the strychnia increase in intensity.—*London Lancet*, August, 1843, from *L'Experience.*

Normal Proportions of the Horse.—In the French school of veterinary art, the height of the horse, measured from the poll of the head to the ground, is estimated at three head's length; from the top of the withers to the ground, at two and a half ditto; the distance from the point of the shoulder to the point of the quarter at two and a half heads' length; the height from the summit of the croup to the ground at 2 38.100.

From the summit of the withers to the point of immersion of the neck in the throat 66.100, and the same from the withers in a horizontal line, to a level with the summit of the croup, extending the same horizontal line, to a level with the point of the quarter; and from the point of one shoulder to that of the other in a straight line.

From the immersion of the neck in the withers to the mane, half a head's length; and to the point of the shoulder 82.100 of a head's length; and the same from the point of the quarter to that of the stifle; from one haunch to the other in a direct line; from the summit of the croup to the stifle; from the stifle to the hock; and from the hock to the ground.

The greatest breadth of the belly, in a straight line, equal to one head's length; the depth of the body from the lowest part of the back to its greatest dip, the same. Depth from the summit of the withers to the lowest dip of the chest, one head 22.100; from the withers to the stifle, one head 64.100; and the same from the summit of the croup to the elbow. Eclipse had not these proportions; he measured 66 inches (16½ hands) in height, standing an inch higher behind than before, and this great height was still exceeded by the length of his body, that being 69 iuches. He was remarkable, however, for the smallness of his head, that being only 22 inches in length, or one-third instead of two-fifths of his height. "Eclipse was never esteemed handsome, yet he was swift, and the mechanism of his frame was perfect," says Saint-Bel, who accordingly set up his proportions for a model in the English veterinary school, Eclipse having been unquestionably a race-horse of the first distinction both for speed and bottom; and who won more renown on the turf than any horse either before or since his day.—*London Lancet*, from *Veterinarian*, August.

Ioduretted Syrup of Sarsaparilla.—Ricord has just given a formula in the "Gazette de Santé" *for ioduretted syrup of sarsaparilla*, which is composed of a drach of iodide of potassium to about twelve ounces of sarsaparilla syrup, and which, as he says, is highly suitable as a remedy for *tertiary* syphilitic symptoms, or after the patient has been the subject of a long mercurial course. A tablespoonful may be taken three times daily.—*London Lancet.*

New Preservative for Animal Substances.—A French physician has addressed a paper to the Academy of Sciences on the power of a *syrup of iron* to preserve animal substances unchanged. This syrup is a combination of sugar and iron which does not decompose, crystallise, or ferment, at any temperature. Meats kept in this syrup diminish very little in weight, resist the most active putrefactive agency, and on being washed in cold water resume their original volume and appearance as from animals newly killed.—*Ibid.*

Treatment in Cholera.—A physician of Freienwalde has, it is said, in the "Medic. Zeitung," proved the acetate of lead, with strychnine, to be effectual in causing the immediate cessation of the vomiting in sporadic cholera, and in tending to the speedy cure of that disease. The urinary secretion is, however, suspended under its emplayment, sometimes for as long a time as two days. Dr. Steinbach, of Bradenburg, is an advocate for the acetate in the same disease, but in combination with a solution of pure tannin. This mixture, he says, is specially indicated in the cases in which a softening of the gastro-intestinal mucous membrane is present.—*Ibid.*

Nervous Headache, &c.—A physician of Marseilles has found headaches of a kind dependent on nervous disturbance, obstinate tic-douloureux, &c., curable by the application of liquor ammoniæ (*l'ammoniaque depuis le ving-cinquieme degré jusqu' au trente-deuxieme*), on a dossil of lint, to the alveolar border of the palate. The solution is to be retained in contact with the mucous membrane immediately within the teeth, until an abundant effusion of tears is excited, when the exacerbation of pain will suddenly cease. This remedy proves more efficient against tic douloureaux attacking the frontal and facial than the occipital nerves; but it has been successful in several authenticated instances in which the latter have been the seat of pain.—*Ibid.*

Treacle (Molasses) and Water for Burns.—Mr. Bulley used this with very good effect in a case of scald from melted pitch.

In the first instance he employed a paste composed of equal parts of treacle and flour. We need not mention the particulars of the case, but content ourselves with the concluding remarks of Mr. Bulley.

"In recording the treatment adopted in the foregoing case, I do not wish to take any credit to myself for employing a remedy with the virtues of which, in such cases, surgeons have been long acquainted. Mr. Greenhow, of Newcastle, first introduced it into practice, using it as a defensative, for the purpose of preventing the access of air to the denuded parts. He did not, I believe, continue to use it throughout the whole progress of the case, but substituted for it other applications which the circumstances of the case might afterwards seem to require. In the commencement of the preceding case I used it, mixed with flour, for the same purpose of excluding air, but, finding it occasioned pain, and that I could not properly see what was going on underneath, although it had seemed to promote the growth of granulation, I determined to use equal parts of treacle and water, on rags, constantly applied as a lotion to the injured surface. The application of treacle in this manner has convinced me by the result of this, and other cases similarly treated, that it has some specific effect in expediting the cicatrisation of burns and scalds, however extensive they may be, and that it prevents, in a great degree, the unsightly puckering and contraction which too often interfere with the proper actions of joints involved in these accidents. I have, since that time, had several opportunities of testing its value as a remedy in these cases; and have, from what I have seen of its effects, adopted it in every case of the kind which has come under my care, both in hospital and private practice; and in each case it has seemed to have been instrumental in preventing, or at least diminishing, the chances of consecutive contraction.—*Medical Examiner*, from *Provincial Med. and Surg. Journ.*

Case of Poisoning by Lead in Maccouba Snuff. By Professor Otto, of Copenhagen (Zeitschrift fur die Gessammte Medicin).—The following cases have excited universal attention at Copenhagen. Dreyer, highly esteemed as a scholar and a botanist, has enjoyed general good health until the autumn of 1841, when he was seized with the common symptoms of dyspepsia, and with costiveness and a muddy com-

plexion. As he led a sedentary life, exercise was advised and bitter and laxative pills were prescribed. After this, he felt a little better, but just before Christmas, was seized with uncommonly severe colicky pains. His pulse was natural, tongue clean, and the abdomen not painful on pressure. The bowels had been open on the previous day. Enemas containing a grain of opium gave relief. Even then, the suspicion of lead being the cause, was excited, and Dr. Ahrensen supposed that the red wine prescribed, might contain it, but this was found not to be the case.

The improvement did not long continue, the bowels remained costive, the colicky pains returned with cardialgia. He had four of these attacks during the winter, which were removed, partly by purgatives and partly by opiates. In one of these only, was there quickness and tenseness of the pulse, with tenderness of the abdomen, and for this he was bled, and calomel was added to the opium. During the last attack, a very large quantity of round hard fæces were discharged, and after this the patient felt very well. In a week however, he was attacked with violent headache and this ended in a comatose state. In spite of all remedies used, he died at the end of two days, and about four months after the first attack of colic.

On dissection, every part was found healthy in the abdomen, except a trifling enlargement of the colon, probably caused by the frequent clysters; the brain too was healthy, except a slight injection of the membranes.

The deceased was much lamented, but his death had been almost forgotten, when his friend Dr. Bramsen read in a journal that red Maccouba snuff was sometimes adulterated with red lead. On this, he imagined that his deceased friend, who took a great deal of this snuff, might have been poisoned by it. He therefore bought some at the shop where the deceased used to buy his and found that it was mixed with a number of large and small grains, which looked like minium, and on chemical examination, he discovered that the snuff contained from sixteen to twenty per cent. of lead.

In the case of a young physician still alive, who is a great snuff-taker and long used the same snuff as the deceased patient, there has been an affection of the abdomen, characterized by colicky pains and obstinate costiveness. This has continued for a year, and he has become very thin. As he has now left off taking the snuff, it is to be hoped that he will be cured.—*Amer. Journ. of the Med. Sci.*, from *Lond. Med. Gaz.*, April, 1843.

Treatment of Varicose Veins.—Moulinie recommends the following method of operating for the cure of varicose veins, as not being attended with the bad results that not unfrequently succeed to other similar operations:

"A fold of the skin is taken up in a direction parallel to that of the vein, and at some distance above the varicose part, an incision is then made across this fold down to the cellular tissue around the vein, disturbing the part by dissection as little as possible. An eye-probe, armed with a silk or fine thread, is then passed under the vein, and the latter is then tied. An incision is often made across the vein, a little above the ligature, for the purpose of preventing any inflammation of the vein spreading by continuity along it. The skin is then brought together by strapping, in order to protect the vein from the contact of air as completely as possible."—*Amer. Journ. of the Med. Sci.*, from *Prov. Med. Journ.*, July, 22, 1843, from *Bonheur en Chirurgie, &c.*

Herpetic Pruritus.—Dr. Barosch has cured a case of herpetic pruritus of the perineum and scrotum, which for twelve years resisted various remedies, and caused the greatest discomfort to the patient, by the following solution:—℞. Iodine, gr. xv., hydriod. potass. ℈ij.; solve in aq. distill. ℥v. alcohol, ℥j. M. This solution applied to the parts, in three weeks effected a complete cure.—*Amer. Journ. of the Med. Sci.*, from *Gaz. Méd. de Paris*, Jan. 28th, 1843, from *Oesterreichische Med. Wochens.*

Pruritus of the Vulva.—This is a not unfrequent and a most distressing complaint. In the treatment of it, Lisfranc places his chief reliance on an occasional bleeding from the arm. Lotions of alum, or of nitrate of silver, are sometimes very useful; but on the whole, Raspail's remedy—five parts of starch and one of camphor—is still better as a local application. It may be applied two or three times a day; the proportion of the camphor should be made to vary, according to the irritable state of the affected parts. Fumigations with the vapour of sulphur will sometimes effect a cure, when all other remedies fail. Let it ever be remembered that pruritus of the vulva is not unfrequently connected with some morbid

affection of the uterus, and therefore that our chief attention must be directed to the removal of the cause. An opiate enema is sometimes a valuable remedy. Lisfranc alludes to a very obstinate case, where a very rapid cure was obtained from the administration of sulphate of quinine, after other means had quite failed.—*Amer. Journ. of the Med. Sci.*, from *Med. Chirurg. Rev.*, April, 1843, from Lisfranc's *Clinique Chirurg.*, tom. ii.

Gallic Acid in Menorrhagia.—Professor Simpson stated at a meeting of the *Med. Chirurg. Soc. of Edinburgh*, April 19th, that for the last year he had employed gallic acid in some cases of menorrhagia, with the most successful results. Like all other remedies directed against that disease, it had also occasionally failed in his hands. Some of the cases which had completely yielded under its use were of an old standing, and aggravated description. He gave it during the intervals, as well as during the discharge, in doses of from ten to twenty grains per day made into pills. It had this advantage over most other anti-hemorrhagic medicines, that it had no constipating effect upon the bowels. He was first induced to use it from finding a case of very obstinate menorrhagia get well under the use of Ruspini's styptic, after many other remedies had utterly failed, and from it being alleged that gallic acid was the active ingredient in that styptic. He suggested whether the anti-hemorrhagic properties of some of our common astringent drugs may not depend upon the gallic acid as much or more than upon the tannin which they contain, or upon the tannin becoming changed into gallic acid within the body.—*Amer. Journ. of the Med. Sci.*, from *Lond and Edin. Monthly Journ. Med. Sci.*, July, 1843.

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PROFESSOR CALDWELL ON ANIMAL CHEMISTRY.

"Physiology Vindicated in a Critique on Liebig's Animal Chemistry," is the title of a spirited and labored pamphlet of ninety-four pages, by Professor Caldwell, which was published early in the summer. By some unaccountable accident we failed to receive our presentation-copy of the work, nor did any of the notices of it which have appeared reach us until we returned a few days since to the city. This apology we deem due to our readers for having so long neglected to introduce to them a western publication which is exciting, and is likely to excite, no little interest in scientific circles. It is a production abounding in vigorous thought and plausible argument, written in a style of clearness and elegance which commands general admiration. The chemico-physiological doctrines of Liebig have no where encountered such uncompromising hostility, as is evinced in the pages of this pamphlet. Dr. Caldwell, in truth, stands almost alone in his utter opposition to the application of chemistry to the explication of vital processes, and in this war upon what he styles "*dislocated chemistry,*" he is met not only by the whole host of chemists, but by nearly every physiologist of note

who has appeared since the time of John Hunter. By every physiologist of the present century whose works we have consulted, with, at most, but two exceptions, the light of chemistry is invoked, as friendly to the advancement of physiological science. Far from regarding the researches in animal chemistry as "forbidden aggressions" on the province of physiology, they have availed themselves of the facts brought to light by the analyses of the chemist, many of them admitting, that chemistry alone is competent to explain some of the functions of the animal economy. These, embracing some of the first names in our profession, the veteran author of "Physiology Vindicated," styles "pretended physiologists," and, in most emphatic language, closes his work with a call upon every friend of "sound physiology, to defend it from the *unhallowed usurpation and contaminating influence of dislocated chemistry.*" To his imagination Liebig seems "another Attila—the *curse of God*"—whose doctrines he conceives to be a "domination" over the philosophy of living organized matter to which it would be degrading to submit!

We listened, last winter, with great interest, and, we believe, without any unfavorable bias, to the lectures in which the views of Dr. Caldwell embodied in this pamphlet were set forth. We weighed whatever he had to urge, with his peculiar energy, against the theories of Liebig, as well as against animal chemistry in general, and the result was any thing but a conviction of the force of his objections. On the contrary they struck us as generally susceptible of a ready and satisfactory answer. Such an answer was essayed a few evenings after, and as from circumstances already mentioned no notice of Professor Caldwell's work has yet appeared in our Journal, we propose in an extended review of it to present the facts and explanations embraced in that reply, in our next number. Meantime, we would recommend "Physiology Vindicated" to the attentive perusal of all who are curious to see what of fact or argument can be opposed to animal chemistry. Y.

GRAHAM'S CHEMISTRY, WITH NOTES AND ADDITIONS, BY ROBERT BRIDGES, M. D.

The enterprising publishers, Lea and Blanchard, have rendered a great service to American teachers and students of chemistry by the

publication of this standard work. As a text-book, it is all that could be desired, and its ample information upon all points within its scope renders it a most valuable work of reference in the laboratory. Its illustrations are numerous and materially enhance its excellence as a manual for students. It is the production of one of the first of living chemists, and exhibits the science of chemistry as it now is, with a judicious fulness of detail, and a luminous clearness which will commend it to the special favor of beginners. Including as it does the applications of the science to the arts, it is adapted to every class of persons who have an interest in chemistry, and we therefore cordially recommend it as one of the very best works extant on the subject. Y.

OPERATION FOR CLUB FOOT.

The operation for this deformity has recently been successfully performed by Dr. A. C. Hensley, of Versailles. We extract the following account of it from his letter dated August 23d:

"The patient, Mr. Frazer, is about sixteen years of age. About thirteen years since he had an attack of fever, very soon after which the great toe became gradually extended; not many months after, elevation of the heel began to take place, and from this time he has been walking on the extremities of the metatarsal bones. In the last four months the foot has grown rapidly worse. At present his state is as follows: After the most minute examination I find his general health as good as could be desired. As relates to the condition of the affected member I find the cutaneous sensibility quite as lively in it as the other; motions performed with equal *celerity.* The degree of atrophy is considerable, amounting to *a marked contrast* in the size of the two members; the muscles however are firm. The distortion of the foot is caused by the contraction of the muscles which terminate in the tendo achillis, the tibialis posticus and the extensors of the great and littles toes. When laid on a bed the heel of the affected foot cannot be brought as low as the heel of the sound foot, by full two inches; the plantar aspect of the foot very *deep* or concave; the extension of the great and little toes so great as to elevate them considerably out of their natural position. The foot is slightly though not decidedly inclined inwards. There is no anchylosis but a very considerable degree of displacement between the individual bones making up the tarsus. The tarsal-joint is free in its movements until prevented by the contraction of the tibialis posticus. This in short is a case of club-foot of that variety called *pes equinus,* of the second degree, very well advanced.

"On the 22d of June, I operated by dividing the tendo achillis and the tendons of the extensors of the great and little toes, on the plan of Mr. Whipple of Plymouth, except that the tendons were divided transversely instead of obliquely. The heel descended three quarters of an inch immediately, and the toes came to their normal position. The incisions were at once closed with adhesive strips, and Professor Mutter's stretching apparatus was applied by whichan attempt was made to bring the heel gradually but completely down. This was accomplished, as well as re-union of the external wound, by the eighth day after the operation. From this time the foot and leg were kept stationary with the view of promoting the organization of the intermedium by which the divided tendons were to gain length and be re-united. This was certainly well affected by the end of the fourth or beginning of the fifth week.

From the extension of the foot in the deformed state, there were two effects which required time, friction, and mechanical support to relieve after complete re-union of the tendons had taken place. 1st. The antagonistic power of the flexors of the foot was not entirely regained until the thirty-fifth or thirty-sixth day. The consequence of this was more or less trembling when it was in a flexed position. 2d. The integuments on the dorsum of the foot having like the flexor muscles been for years on the stretch, were, when the parts were restored to their natural position, wrinkled and relaxed. The effect of this upon the blood-vessels of the part, was to render them more tortuous in their course. Now, this condition of the blood vessels and the relaxed state of the integuments not affording the ordinary degree of mechanical support to the veins, subjected the foot to venous congestion whenever it was placed in a depending position. This effect ceased about the time when the flexor muscles regained their natural tension.

"In the beginning of the sixth week he began to walk, which at first was done very awkwardly, the limb operated on being very stiff at the ankle joint on account of the intermedium having adhered to the surrounding parts. From this time the spring shoe was put on with which he has been walking ever since. August the 21st, he informed me when his shoe was off, he could walk without limping in the slightest degree, and from this time (a little less than two months) I considered the cure perfect.

"In this case certainly all of the objects of the operation have been effected in a very short time.

"He never lost an hour's sleep during the process of the cure."

C.

HEALTH OF THE SOUTH.

While fevers of a highly malignant grade were prevailing in many parts of the South-West, during the past warm season, other districts

were almost wholly exempt from febrile complaints of every character. In a pretty extensive scope of practice, in Rutherford county, in Tennessee, we did not meet with a single case of bilious remittent fever, from March till the middle of October, and a medical friend, at Murfreesborough, assured us that he had not treated a single case of the disease during the season. Intermittent fever appeared in some neighborhoods, in scattering cases, but was not prevalent in any part of the county. So healthy a season was, perhaps, never known in that region of the State. The character of the season is summed up in the following condensed statement, communicated to the Nashville Whig, by Professor Hamilton, of the Nashville University:

"The late month of September has far surpassed the corresponding months of the years immediately preceding in respect both to heat and moisture. Its mean temperature was 75.445 with a range of 40 degrees, from 53 to 93. It was warmer than September 1834 by 7¾ degrees, 1835 by 14—1836 by 2¾—1839 by 9⅛—1840 by 9—1841 by 4¾—1842 by 3⅝, and exceeded their average by 6.48. It even surpassed the late months of June and August, by about ½ a degree, and was only 4 degrees below July. As compared with the summer of 1835, it had a higher mean temperature by about 2 degrees, was about equal to that of 1842, and only one degree lower than the average summer temperature from 1834 to the present time, if we except the years 1837 and 1838. Of these two years I am unable to speak for want of a record.

"The amount of rain during the month was 8.61 inches—of this 3.22 inches fell on the 13th day in 14 hours, and 3.04 inches on the 29th and 30th in 27 hours. The whole amount during the 9 months of the present year is 43.35 inches, of which January gave 3.79—February 2.93—March 4.29—April 4.65—May 4.04—June 4.87—July 4.23—August 5.94, and September 8.61. The monthly average is about 5 inches.

"The mean degree of humidity of the air for the month was 79 inches, a scale embracing 100 degrees, and the minimum was 12, as observed on the evening of the 30th. In this scale the greatest degree of moisture is 0 and the highest degrees 100. September 30th, was the dampest day that has occurred since the 10th of February last, when the Hygrometer stood at two."

We hope our correspondents who have practised among the fevers of this season will favor us with an early account of them, as of the weather prevailing at the time. Y.

JOHNSTON'S MANUAL OF CHEMISTRY.

This work is intended for a text-book in Colleges and other Seminaries of learning, and as a manual for such learners it is sufficient recommendation, that it contains for its basis Turner's Elements of Chemistry, such parts of that admirable work being omitted as would be out of place in a text-book. It is disencumbered of many details of facts, and discussions of opinions and theories, which are rather calculated to confuse the young student, than to interest him, at the same time that it is fuller than any of the manuals designed for the same class of learners. With all the clearness of Turner, it is more practical, going more into the application of chemistry to the arts, which, with its diminished size, renders it a capital book for schools, into which, it is hoped, it will be extensively introduced.

Y.

DEATH OF DR. HARLAN.

This eminent anatomist and zoologist died in New Orleans suddenly, of apoplexy, in the month of September. Dr. Harlan was in the prime of life, and is a great loss to our profession of which he was an ornament.

MEDICAL INSTITUTE OF LOUISVILLE.

Students are coming in well to this institution, and the class promises to be one of the largest that has yet attended it.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY

DECEMBER, 1843.

ART. I.—*Observations on the Pathology and Treatment of Neuralgia.* Communicated to the Medical Society of Columbia, Tennessee. By THOMAS BARBOUR, M.D. [Published by request of the Society.]

In the whole circle of medical science, there is no subject that is involved in so much obscurity as that of the true pathology of neuralgia; and none that is more worthy of our attentive investigation, with the view to determine, if possible, its seat, its essential nature, and the best method of treatment.

As it should be the paramount object of every one who is engaged in the pursuit of knowledge, to discover and exhibit truth, rather than attempt to establish some preconceived opinion, it is my design, in the following brief communica-

tion, not to assume, in the spirit of dogmatism, any particular position, but merely to present the results of my observation and experience, for the consideration of my professional brethren—with the hope that they may serve *in some degree* to elucidate the pathology, and improve the treatment of neuralgic affections.

I propose to discuss in an impartial manner, the question which has been selected for debate, namely: Is neuralgia an idiopathic affection of the nervous centres and branches, or is it sympathetic of remote organic irritation?

It must be admitted that some of the most prominent phenomena of neuralgia, in many cases at least, indicate the nervous centres, especially the spinal marrow and its branches, to be the original seats of disease. Some pathologists maintain that all neuralgic affections are dependent on primary spinal irritation. This is a simple and attractive doctrine, and hence has many advocates. In the early part of my professional life, I was captivated with it; and emboldened by the confidence inspired by high authority, as that of Teale, I treated every case of neuralgic character by cupping, counter-irritation, &c., over the spinal column, believing that every case presented more or less evidence of spinal affection. But as I became enlightened by experience, I was induced to conclude that, whilst it could not be denied that the nervous centres and branches may be the seat of primary disease, which may cause neuralgia in remote parts, it was too exclusive a view of its pathology, and that in order to the adoption of a rational, and successful treatment, it was necessary, in many instances, to extend our investigation beyond the points of manifestation, and the origins of the spinal nerves—with the view of discovering the ultimate cause, and of directing our remediate agents, in an especial manner, to its removal. The facts which led to this conclusion are the following: 1st. Many examples of neuralgia occur, in which, upon the most critical examination, there is an entire absence of those local signs which are considered to be characteristic of actual spinal disease. 2d. The utter inefficiency of the most potent

local applications, in very many cases, where, apparently, the most unequivocal manifestations of actual spinal disease do exist. 3d. That, in numerous instances, patients after having been tormented, and nearly exhausted by cupping, blistering, tartar-emetic ointment, &c., and whom both physicians and friends have despaired of ever relieving, have often gradually recovered under the influence of alterants, mild aperients, and a general roborant course. 4th. That in a large majority of the severest cases of neuralgia which have ultimately proved fatal, autopsy has not disclosed the slightest appreciable lesion, which could account for the painful symptoms during life. In view of the above facts, I cannot doubt but that, in a large proportion of the very worst cases which come under our care, the local neuralgic affections are sympathetic of remote visceral irritations, which, through the medium of the spinal branches of the great sympathetic, morbidly impress the spinal marrow, and that the impression thus received being irradiated along its various trunks, is manifested by severe pain, or some disagreeable sensations, most generally towards the terminal-points of the spinal apparatus.

Unless we take this more comprehensive view of the pathology of neuralgia, I feel assured that, in but too many instances, we shall attack the shadow and not the substance of the insidious enemy with which we are contending, if we direct our chief efforts to those points on which its energies *appear* to be expended.

The facts which seem to prove the correctness of this view of the pathology of neuralgia are the following:

1st. The sympathy which is acknowledged by all medical men to exist between the viscera and the general nervous system. There are many familiar and striking illustrations of this connection. The numbness of the lower extremities from calculus in the kidney; the pain and numbness of the shoulder and arm from chronic hepatitis; the agonising headache from disordered stomach and liver, the severe pain in the head, back, and extremities so common in bilious and

other fevers, accompanied with marked evidences of visceral derangement; the paroxysms of hysteria in adults, and the convulsions in children, from chylopoietic derangement; afford the most satisfactory evidence of the intimate connection between the various internal viscera and the nervous system.

2d. The undoubted dependence of various forms of paralysis on visceral diseases. The cases of paraplegia reported by Stanley, and proven to be dependent on diseased kidney; and those of Abernethy, dependent on hepatitis and enteritis, afford strong testimony in support of the important connection referred to.

3d. The utter inefficacy of all remedies applied to the spinal column, in cases of paralysis and neuralgia, connected with visceral diseases, whilst the symptoms of the former are often found to decrease, "pari passu," with the removal of the latter.

To conclude this summary view of the pathology of neuralgia, I would remark that from the light which we at present possess in connection with this intricate subject, we are forced to the conviction that, whilst it must be admitted that the nervous centres and trunks are susceptible of primary disease, the consequence, most generally, of mechanical injuries, of disordered circulation in the nervous envelops, or of disease in the bony casements, in, perhaps, much the largest proportion of cases of neuralgia which come under our notice, disorder or disease of some of the internal viscera will be found to be the "fons et origo" of this most afflicting malady.

My object, in the next place, will be to illustrate by a few interesting cases, selected from a number that have come under my observation, the above important pathological principle, which, if acknowledged by some, is far from being properly estimated by the profession at large, and the adoption of which would, in my opinion, conduce very much to the alleviation of human suffering.

Case 1st. The first case to which I shall refer, came under

my notice in 1831, in Virgina, where I then resided; and as it presented some interesting features, I will give it somewhat in detail. The subject, Mrs. B., was a woman of delicate constitution, and aged about seventy. During my absence from home I was sent for to relieve her of what was supposed, by the family, to be an unusually severe attack of bilious colic, to which she was subject. Two other physicians of intelligence and skill were called in, and continued for several days to attend the case. Despairing, however, of being able to afford her any relief, they abandoned her to die. On my return home I was sent for again, and found her in the following condition: her pulse was very much sunk; her skin pale, shrunken and bathed in cold clammy sweat; there was great muscular prostration; she suffered intense pain and retraction of the abdomen; there was rigid constipation, and almost continued vomiting of fæcal matter, which, I was informed, had continued for several days. Here was a strongly marked case of intussusception. Having understood that all the usual remedies had been diligently applied, with but little relief, I apprehended that the case was hopeless, as I thought it highly probable that mortification had already taken place in the intestine. Being solicited, however, to do something for her, I gave her a very large anodyne, and some diffusible stimulants in the first place, and ordered a hot bath to be prepared. During the preparation of the bath, I made up twelve pills consisting of one drop of pure croton oil to the pill, and determined to administer one every two hours, until some decided effect should be produced. I also administered an enema, containing twenty grains of tartar-emetic, and about two drachms of laudanum, immediately after which she was placed in the hot bath. Under the combined influence of these means, a most fortunate and unexpected change took place in her case. The spasm of the intestine yielded; she discharged enormous amounts of peculiarly offensive matter from the bowels, consisting of hardened lumps; the vomiting greatly abated, and finally ceased; the abdominal pain and distention gradually gave way, leaving, however, conside-

rable soreness. So great was the amendment, even in the course of twelve hours after I saw her, that I entertained a strong hope of her speedy recovery. Apprehending the occurrence of severe inflammatien, I continued the use of mild aperients, anodynes, and fomentations to the abdomen. These means, however, proved unavailing in warding off a severe attack of enteritic and peritoneal inflammation which again placed my patient in imminent danger. This was combatted by extensive cupping; calomel and opium, two grains of the former to one of the latter, every two hours; with occasional doses of castor-oil, and spirit of turpentine; hot mush poultices, and lastly, a large blister over the abdomen. Under this treatment the abdominal inflammation greatly subsided, but took on a chronic character. She now began to complain of uneasy sensations, such as numbness, pricking, soreness, and twitchings in her right leg, midway between her knee and ankle-joint. These sensations increased in intensity until there was permanent and severe pain, which was subject to occasional paroxysms of greatly increased violence. For the relief of the neuralgia every local remedy that could be thought of was applied; blisters above and below the seat of pain; various anodyne plasters; together with large anodynes internally, were used unavailingly. She continued to suffer most severely for several weeks, with but little mitigation. As there was not the slightest indication of spinal disease, and as the whole history of the case appeared to justify the opinion, I considered the neuralgia as sympathetic of the abdominal affection, and discontinuing the use of local remedies, I contented myself with the adoption of such means as were calculated to subdue the chronic inflammation. With this view, small doses of calomel and opium, mild aperients, and repeated counter-irritation were diligently made use of. Under this course of treatment, the abdominal inflammation disappeared, and with it, the neuralgic affection. Though the patient was now a good deal reduced in consequence of long continued severe pain, and irritative fever, I still hoped that she would ultimately recover. Soon after the disappearance

of the neuralgic affection, the extremity below the seat of pain became discolored, assuming a dark livid appearance; it became unnaturally cold, insensible, and dwindled away almost to nothing. This condition I regarded as a modification of dry gangrene, and treated it with tonics, as mineral acids and quinine, opiates, wine, and nourishing diet. I proposed to amputate, assuring the family that it afforded the only reasonable ground of hope. One of the physicians who first attended the case being consulted, the operation was opposed upon the ground that, in all probability, the patient would sink under it, in consequence of her advanced age, and exhaustion from previous pain. The operation was not performed, and she gradually sank under the influence of irritative fever. My impression at the time was, and now is, that her life might have been saved by timely amputation. The above case presents several points of great interest: 1st. The successful termination of the case, so far as the intussusception was concerned, under apparently the most desperate circumstances. 2d. The cotemporaneous appearance and disappearance of the neuralgia and the abdominal inflammation, showing the relation of cause and effect. And 3d. The occurrence of dry gangrene, after the subsidence of the neuralgia.

Case 2d. This case came under my notice in 1835, in Maury county, Tennessee. The subject of it, Mrs. W., was aged about twenty-five, and was of good constitution. When she first consulted me, the most prominent symptoms of which she complained were referable to the chest. She had a violent cough, that was decidedly paroxysmal; there was constant pain in some part of the chest, which occasionally became intensely severe; the respiration was hurried and painful; the pulse was very little affected; the skin was of a natural softness, and temperature; and there was little or no expectoration.

There being no febrile symptoms, and no auscultatory signs to justify the opinion that there existed any serious thoracic affection, the most reasonable diagnosis that I could make

was, that it was of a nervous or sympathetic character. With this view of its pathology, I administered mild aperients and alterants, for the purpose of rectifying the chylopoietic viscera; and at the same time made use of the most powerful anodynes, antispasmodics, and counter-irritation. This treatment produced but little mitigation of the cough, and pain in the chest. The pain which was at first confined to the chest, gradually extended to the shoulder, down the arm, and finally settled in the wrist and hand, in the form of the most acute neuralgia. For the relief of this, every remedy both general and local, that is usually adopted, was fairly tried. The most powerful internal anodynes were administered; and topical applications, as cupping, counter-irritants, and anodyne embrocations were made from the origins of the spinal nerves, which go to form the axillary plexus, down to their digital extremities; but all proved of little avail. Having, as I thought, exhausted all the known resources of medicine, I was strongly tempted to resort to surgical aid. It occurred to me that strong pressure either with the tourniquet or well adjusted bandage might be of service. This means, however, affording but little relief, I ventured to propose a division of the nerve, but the patient would not consent. I now nearly despaired of ever being able to relieve my patient, and discontinued the use of almost all the remedies, advising her to rub her arm and wrist occasionally with some anodyne and stimulant liniments, and to keep the painful parts well wrapped up. Soon after giving this advice, a most fortunate circumstance occurred, which, at once, developed the cause of her singular and afflicting case, and which afforded almost instantaneous relief. During an unusually severe attack of cough, she ejected either from the lungs, or larynx, an exceedingly irregular and rough calcarious mass, about the size of a common bean. This was followed by a rapid abatement of the pectoral symptoms, and the local neuralgia; and her general health soon became as good as ever.

In full view of the whole history of the above interesting

case, I could not doubt the dependence of the violent paroxysmal cough, and the acute pains of the chest, on the mechanical irritation arising from the presence of the body referred to; nor did it appear less obvious, that the neuralgic affection of the arm and wrist was sympathetic of pulmonary or laryngeal irritation.

Case 3d. This case presented itself to my notice in 1839, in the State of Alabama. The subject, Mrs. G., was aged about twenty-five; and of rather a delicate, nervous constitution. This case was characterised by its great severity, and unusual number of anomalous symptoms, the detail of which would occupy the compass of an ordinary communication. As I design to be as brief as possible, I will content myself with giving merely a general outline of the symptoms, and course of treatment pursued.

When I first saw her, she presented obvious indications of general nervous depression; her complexion was pale and sallow; her appetite slight and capricious; her muscular strength was much diminished; and there was a general sense of numbness, pricking, twitching, and of the passage of cold water, principally in the lower extremities; and there was unusual mental depression. For the above symptoms I administered mild aperients, and advised the use of strong liniments, and friction over the extremities, together with the precipitated carbonate of iron. These means afforded but little relief. The uneasy sensations, especially in the lower extremities, continued to increase in intensity, until she suffered the most acute pain in the back, and along the whole course of the sciatic nerve and its branches. The pain at length became paroxysmal, and starting in the back, would in an instant radiate along all the trunks proceeding from the lumbar and sacral portions of the spinal marrow; and would often come on with so much violence that it produced a general convulsive movement of the body. She next suffered severe pain in the chest, accompanied with dyspnœa, and often inordinate and irregular action of the heart. Severe pains then occurred in the upper extremities, attended by

great numbness, and loss of the sense of touch, and power to grasp, so much so, indeed, that it was with the utmost difficulty that she could hold any small body, as a needle or pin, in her fingers. At this stage of her case, the chief source of her suffering was the most severe lancinating darting pain in the face and scalp, occupying but one side at a time, but rapidly shifting from side to side. She frequently complained of a very curious and uncommon sensation about the brain, which, to use her own language, seemed, just before each severe paroxysm of pain, to rise up and expand, so as to become much too large for the casement which enclosed it; hence arose a most distressing sense of oppression and stricture about the head. There was morbid sensibility of the eye and ear, to such a degree that strong light or loud sounds greatly aggravated her sufferings. For some time she had chills which seemed to observe a regular periodicity; and so great was her depression during the paroxysms, that the family, and her uncle, an intelligent physician, who frequently saw her with me, thought that she could not possibly survive another.

During the whole course of this case there was another prominent symptom, which I have designedly reserved for the last of the catalogue of phenomena, as it seemed very distinctly to point to the spinal column as the immediate seat of the disease; this was exquisite tenderness at different points of the spinal column, from the lower cervical to the sacral vertebræ, when pressure was made. Severe pains could be caused in distant parts by even moderate pressure on the painful portions of the spine. Besides the tenderness just referred to, there was a general sense of soreness in the skin and flesh over nearly the whole body and extremities. The advocates of the doctrine which ascribes most, if not all of the neuralgic affections to immediate spinal disease, would pronounce the last mentioned symptoms as pathognomic of such a condition. They are said, by the best authorities, to be universally present in cases of inflammation of the envelopes of the spinal chord. After a careful investigation of the

case, I was led to the conclusion that all of the symptoms which I have detailed, were referable to some diseased condition of the spinal marrow. With this view of its pathology, I made use of cupping along the whole course of the spine, but chiefly over the painful points; using the scarificator and small tumblers I succeeded in drawing a considerable quantity of blood. The cupping was often repeated, and after their application, blisters, or tartar-emetic ointment were applied. In addition to the above treatment, large doses of opium, or sulphate of morphia were occasionally all ministered to mitigate the pain; and mild purgative pills, as the compound colocynth pill, were given to regulate the bowels. Every time the cups were applied there was a great palliation of all the symptoms, which caused my patient to desire its frequent repetition, and my willingness to acquiesce in her wish. But unfortunately, this temporary mitigation was invariably succeeded by an increased aggravation; the patient becoming much weakened, and obviously worse. To obviate this effect, and with the view of making a strong new impression on the nervous system, I administered the sulphate of quinine and the precipitated carbonate of iron, alternately, in as full doses as she could bear. These disturbed her head and stomach very much, and were, therefore, discontinued.

At this stage of the case my intelligent friend Dr. Helms, of Tuscumbia, Alabama, was called in consultation. I gave him a full history of the case, and the course of treatment pursued. He remarked that the symptoms under which she had labored, and, indeed, which she then suffered, seemed to indicate the existence of spinal affection, but suggested that, as the treatment which had been the most appropriate that could have been adopted, upon the supposition of the existence of such a condition, was not only proving unavailing, but rather injurious, we should direct our attention to some other point, with the view of discovering the true pathology; and intimated that morbid sensibility of the gastric nerves, and hepatic disorder might be the origin of the afflicting ner-

vous affections. Having failed with the most potent remedies addressed to the spine and to the general nervous system, and readily conceiving how the latter conditions, supposing them to exist, could produce the phenomena exhibited in the case, I unhesitatingly assented to a change of treatment, and to the adoption of means calculated to restore the chylopoietic viscera to a healthy condition; and at the same time to impart tone and vigour to the general system. Having agreed, in consultation, on the general indications to be pursued, I adopted the following plan of treatment. In order to improve the biliary secretion, to allay the morbid sensibility of the stomach, and to keep the bowels very gently evacuated, I combined one drachm each of blue-mass, rhubarb, and ext. hyosciamus; and divided the mass into thirty-six equal pills, of which I administered one or two every four or six hours, according to circumstances. When the pain was very severe, and there was great restlessness, I resorted to the black drop, in full doses, with an excellent effect. For the purpose of imparting tone to the general system, the sulphate of quinine, precipitated carbonate and the muriated tincture of iron were alternately tried, together with port-wine and cordial diet. The quinine and preparations of iron disturbed the head and stomach to such a degree, that they were dispensed with, and the oxide of bismuth alone, or combined with ext. hyosciamus, in the proportions of five grains of the former to three of the latter, in the form of a pill, was continued, three times a day. Hoping that the tonic and revellent influence of exercise, and change of air and scene, might exert an important impression upon the general nervous system, by modifying its sensibility, which appeared to be excessively exalted, and thus break up the chain of morbid associations, I determined to try the effect of carriage exercise. My patient, when much too weak to walk, was lifted into a carriage morning and evening, and the distance was increased a little every time. During the intervals between the rides, I required the room to be more freely ventilated than it had been; and requested her to occupy her

bed much less than she had done; and caused extensive and forcible frictions to be made over the whole surface. Under the foregoing treatment, which, with some unimportant modifications, was continued for two or three weeks, to my great gratification, my patient continued to amend from the time of its adoption; the chylopoietic viscera becoming restored to a healthy condition; the nervous system reduced to its normal state of sensibility; the severe pains and all other unpleasant sensations gradually disappeared, and her general health soon became better than it had been for several years. I received a letter a few weeks ago from my patient's husband, now a resident of Mississippi, in which he stated that she had enjoyed excellent health ever since her recovery from her severe attack of 1839.

The above case was the most interesting that I ever met with. 1st. Because the neuralgic affections were the most extensive, involving, at different periods during its course, almost every part of the nervous system, from the great centres, to their terminal ramifications. 2d. Because it was attended with an unusual number of anomalous symptoms, only a small part of which I have enumerated. 3d. Because all of the most prominent features of it indicated the existence of serious spinal affection; whilst at the same time the remedies directed to its removal obviously aggravated the symptoms. 4th. Because the successful termination of the case was, in my opinion, unquestionably attributable to the use of those means which were administered with the view of removing the supposed visceral disorders.

Taking an impartial view of the whole history of this case, and the effects of treatment, I cannot but conclude that the exquisite tenderness on pressure, along the course of the spinal column, the general soreness of the flesh, and all of the more prominent neuralgic affections, were dependent on gastric and hepatic disorder which morbidly impressed the spinal marrow and trunks, through the medium of the great sympathetic.

Case 4th. This case came under my notice in 1841. The

subject of it, Miss G., a resident of Giles county, Tennessee, was aged about twenty, and naturally of rather robust constitution. The history of her case previous to the time at which I first saw her, was substantially as follows: In the fall of 1839, she was attacked with a severe form of fever, which from the information I received from the family, I suppose was of the remittent bilious character, attended with strong evidences of muco-gastritis and enteritis, and of cerebral irritation. The case was attended by one of the charlatan tribe, who, advocating the propriety of keeping the alimentary canal well washed out, so as to secure a *clean house*, treated it mostly on the purgative plan, administering almost throughout its whole course, if correctly informed, the most drastic cathartics, as enormous doses of aloes, &c. Nature triumphed in a good degree over this *rude* assault; and the patient convalesced very slowly, and was *partially* restored to health. The digestive organs continued for a considerable time very much enfeebled; and the menstrual function was totally suppressed. About the 1st of December, she was attacked with violent pains in her back and extremities, especially the lower; for the relief of which, as informed by the family, active cathartics, and very large doses of opium were administered by her original attendant. As all of her symptoms grew rapidly worse, Dr. F., a practitioner of intelligence and experience, was called in. He regarded the case as one of common hysteria, dependent on uterine derangement, and treated it with purgatives, anodynes, antispasmodics, and emmenagogues. Under this treatment the patient appeared to improve at first, but was subject to repeated relapses, during which the symptoms were greatly aggravated. Dr. F. being at the distance of thirteen miles, and being at the time much engaged, did not visit her very often. Another physician of intelligence, Dr. D., who resided in the neighborhood, was called in. He pronounced the case to be one of acute rheumatism, and treated it with free bloodletting, purgatives, and opiates. As the case grew worse under this treatment, Dr. F. was again requested to attend, and after visiting two

or three times, and adopting the same plan of treatment he employed when he first saw her, with the addition of cupping to the spine, and the use of quinine, he desired that I should be called in consultation. I visited the case with Dr. F. on the 11th of January, 1841; and found the patient in the following condition. The complexion was remarkably pale and sallow; the whole surface was moist, cool and flaccid; the pulse was quick and irritable, and of moderate volume; the tongue was moist, rather pale, and coated; the bowels were constipated. She complained of almost constant pain in the lumbar and sacral portions of the back, about the os coccygis, and along the whole course of the sciatic nerve and its branches. There was very great tenderness on pressure, at various points of the spinal column. Soon after entering the patient's room, she was seized with a most violent paroxysm of pain which, starting, as she said, *in the small of her back*, seemed to fly with the rapidity of lightning throughout the whole spinal apparatus; causing her to scream out loudly, and to writhe upon the bed. Such severe pain could be generally produced by firm pressure over the tender points of the spine. Upon inquiry, I learned that she had had these paroxysms of acute lancinating pain for a considerable time; that at first, they came on at somewhat distant intervals, and, at length, occurred as often as five or six times a day. In addition to the foregoing symptoms, she often suffered acute lancinating pains in her chest, with difficult respiration, evidently of the nature of pleurodynia, which appeared and disappeared very suddenly. After the severe paroxysms passed off, there was considerable languor and debility; and during the whole interval, the most disagreeable sensations of numbness, pricking, and twitching, especially in the lower extremities, were experienced. She scarcely slept at all, unless under the influence of the most powerful anodynes. During the whole course of her afflicting illness, her mind was not at all affected, being always conscious, when awake, of every thing that was said and done.

I felt no hesitation in pronouncing this a decidedly marked

case of neuralgia, dependent, perhaps, on spinal irritation, but most probably on functional derangement of the chylopoietic viscera, and especially of the uterus, the sequelae of a protracted and badly managed case of fever. With this view of its pathology, I advised the repeated application of cups, along the whole course of the spine, to be followed by blisters or tartar-emetic ointment, by which severe counter-irritation was kept up for some time; together with full anodynes to quiet the nervous system; quinine and precipitated carbonate of iron, to invigorate the general system, but chiefly with the view of modifying nervous sensibility, by virtue of the new impression they are capable of making; and purgatives to keep the bowels well evacuated. The above plan of treatment with some little variation was pursued diligently for several weeks, during which time, Dr. F. and myself continued to visit her alternately. It is worthy of remark that, although the signs which usually indicate the existence of spinal irritation, were present in a marked degree, all the topical remedies as cupping, blisters, and tartar-emetic ointment, obviously aggravated all the symptoms of the case. The first effect was that of palliation, but invariably the brief calm thus procured, was followed by increased violence of the paroxysms.

The anodynes and the tonics appeared to be well borne, but produced only a temporary effect. The patient continued to endure her painful situation with very little variation, excepting that, occasionally, she enjoyed an exemption from her painful paroxysms for two or three days together, until the 7th of April, when Dr. F. being compelled to abandon the case in consequence of numerous engagements, I was requested to take the entire charge of it. I visited her on the 7th, and spent the night with her for the purpose of making a critical examination of her case. Soon after I entered the house she was seized with an unusal attack of pain that continued a considerable time. I was informed that she had not slept more than one hour for several days. She was exceedingly pale and debilitated. As all the remedies which

we had used, and they too the most potent, especially the topical, had proved unavailing; I concluded that there must be some visceral derangement that was the source of the evil, and which most probably had not yet been reached. A careful examination of the case convinced me that the stomach and liver were very much disordered, probably in a good degree the effect of excessive use of opium, which had been liberally used from the commencement of the case; and that the uterus was in a state of great sanguineous engorgement, and perhaps of chronic inflammation, as the patient complained of a constant sense of weight and pressure low down in the pelvis, also of pain about the pubic region, and soreness about the neck of the uterus. The case now presented a new aspect; and it occurred to me that, if the congestion and irritation of the uterus could be removed, and the digestive organs placed in a healthy condition, the whole chain of morbid phenomena would be broken up. The next important question for determination was, what means will best effect these desirable objects. After some deliberation, I determined to adopt the following simple course. In the first place I inserted a large seton low down in the back, and applied a blister on the inside of each thigh, directing them to be repeatedly applied. I ordered the warm hip-bath to be made use of twice or three times a day; and the tepid shower bath twice a day. To improve the biliary secretion, and act gently on the bowels, I gave every second night one or two pills of equal proportions of blue-mass, rhubarb and aloes. I occasionally administered a full anodyne, as black drop, or Dover's powder, at night, to secure rest. The precipitated carbonate of iron was continued for some time, as a tonic. I urged her to exert herself, and rise out of bed, and exercise first in the house, then in the open air.

I was exceedingly gratified with the results of the above plan of treatment. I know not to what part the good effects were ascribable, but I do know that from the time of its adoption my patient began to improve; the paroxysms became rapidly weaker, and the intervals longer, until they dis-

appeared entirely, which was about the 30th of April, after which time I administered no more medicine, excepting some gentle aperient pills to regulate the bowels. After this, in compliance with my urgent advice, she took a great deal of horse exercise, which, invigorating the digestive organs, conduced to the establishment of the menstrual secretion, soon after which her general health became as good as ever, and continues to be so.

An impartial review of the whole history of the foregoing interesting case, and the effects of treatment, affords conclusive evidence to my mind, that all the phenomena which characterised it, were sympathetic of gastric, hepatic, and especially uterine derangement.

I could enumerate other cases which I could select from a number that I considered worthy of being noted, but I deem it unnecessary, as those already cited, are altogether sufficient to illustrate the important pathological principle which it has been my object to establish, namely, that most of the neuralgic affections that present themselves to our notice, are dependent on visceral derangements, the morbid action of which, being communicated through the spinal branches of the great sympathetic, to the spinal marrow and trunks, induces that exaltation of nervous sensibility and morbid impressibility which exist, in so high a degree, in this truly afflicting class of human maladies.

ART. II.—*Cases of Remitting Fever, with Remarks.* By JOHN DAWSON, M. D., of Jamestown, Ohio.

I propose now, to extract from my Note Book a few cases, as a fair sample of *remitting* fever, as it has occurred in my practice for the last two years.

The cases which I shall give have occurred upon the summit of the table-lands, lying between the Scioto and Miami Rivers. This region, having but few streams of water, and

these necessarily very small, is deficient in those annual alluvial deposits, found upon the margins of our larger watercourses, and which are supposed to be so fertile in the production of marsh miasmata. Exemption, however, from malaria is here by no means complete. During the winter and spring, the concavities upon the surface of the country, known as *slashes*, become filled with water. Into these the leaves, limbs, and every species of vegetable trash are washed, where they remain to undergo decomposition during the hot months of summer and early autumn. From this circumstance we frequently have a pretty fair share of intermittent fever, remote from any stream of water.

Case I.—*History.*—Mr. J. P., aet. 33, was taken sick August 25th, 1840. Naturally of good constitution, he remained in good health till within six months previous to his present illness, when he suffered some trouble and inconvenience from bad digestion. For this tonics were prescribed, which gave little or no relief; and he continued to grow weak with an adynamic tendency of the system, until he called for medical assistance.

Symptoms.—Unwilling to lie in bed all the time, he would occasionally get up and walk about the house; tongue coated over with a thin white fur, through which the papillæ protruded, the sides and apex red; temperature of the general surface normal; pain in the head and back; pulse from 75 to 80; the former in the morning, the latter in the evening; alimentary canal and urinary organs without any prominent derangement; thirst inconsiderable at first, but gradually increased; appetite impaired, but not entirely suspended.

Effects of Remedies.—No derangement of consequence in the circulation, blood-letting was omitted. The patient was first subjected to the operation of an active cathartic, which cleared the first passages, and made things ready for the means by which the malady was to be subdued. I now prescribed the following combination:—℞. Pulv. nitrat. potassæ ʒj., pulv. ipecac., calomel *aa* gr. xii. M.—Divide into six equal parts, and take one powder every three hours. This

combination, which Dr. Eberle says he has used in his practice for fifteen years in remitting fever, and with the best results, was continued, with the necessary intervals, until some evidence of ptyalism made its appearance on the gums. With this, subsidence of the fever was confidently expected, for it is asserted in very positive terms by most authors, that such will be the case. Disappointed, however, in this result, and having the evidence now of gastro-enteritis in its incipient stage, the nitrate of potass was left out of the combination, and the calomel and ipecac. still continued as occasion required. Under the use of these the irritation of the bowels grew worse, the pulse rose from 80 to 100, several local inflammations were developed, which were controlled by counter irritation, as they successively made their appearance, and the decline of the patient in flesh and strength was daily observed. Mucilaginous drinks also were freely administered. Convinced that I had the best authority for pursuing this course, under the circumstances of the case, it was persisted in until its efficacy was fairly tested. Frequently I observed, during the course of the malady, that when the system was not under the influence of the medicine, it revived and put on the appearance of amendment; and that when medication was again resumed, the case immediately assumed an unfavorable appearance; and so often were the calomel and ipecac., together with opium and camphor, as the indications seemed to require, resumed, that the patient gave no evidence of convalescence for the period of six weeks from the time that he was taken ill. Nor do I think that he ever would have recovered had the treatment not been changed for that of the purely *physiological.* With this the patient steadily, but not rapidly recovered, for so great was the emaciation, that "skin and bones" are the only terms that will convey any thing like an accurate idea of the condition to which he was reduced.

Case 2d.—*History.*—M. B., æt. 25, a farmer by occupation, thin, spare make, constitution about ordinary, without hereditary predisposition of any kind, so far as I could learn. This patient was taken with the premonitory symptoms of fever,

which lasted a week before the chill made its appearance, and after this another week elapsed, during which time he remained about the house, keeping his bed but a small proportion of the twenty-four hours. So little did he complain when in bed or on foot, that the friends were at a loss to appreciate the fact, that there was a person about the house indisposed. His indifference to his own wants, as well as every thing else, in the forming stage of the malady, and for some time time after it had got complete possession, was not peculiar to this case. Most of our cases of autumnal fevers have lately been similarly marked.

Symptoms.—Called to this case June 20th, 1841; the countenance and attitude seemed to speak out in favor of little trouble. As soon however as the *tongue* was exposed, I observed a very prominent protrusion of the papillæ through a yellowish white fur; the edges and apex too were of a dark red, and the whole substance rather moist and flabby. The temperature and color of the skin at the commencement and during the course, varied but little from the natural. The functions of the cerebro-spinal axis were somewhat impaired, which, as the malady progressed, became daily more considerable; bowels had been evacuated regularly, though the discharges were scanty and offensive; the urine had the clear limpid appearance of distilled water at first, but at the acme of the malady it became highly colored, with the secretion considerably impaired. Abdomen not distended, nor tender on pressure, in any part, except slightly in the epigastrium, when I first made examination; but as the disorder progressed, general tenderness was imperfectly developed, though not sufficient to make a decided indication for the use of remedies.

Effects of Remedies.—The treatment of this case was commenced without any abstraction of blood. With a brisk cathartic the bowels were opened, and immediately after this, *hydrargyrum cum creta*, in fine grain doses, was administered from two to three times a day. This medicine was given to keep up the alvine discharges and subdue the gastro-intestinal irritation indicated by the appearance of the tongue. In con-

junction with mucilaginous drinks, it accomplished the design so well, that the patient was kept constantly under its influence as long as the necessity for medication was required. Gum arabic, flax-seed tea, and slippery elm, afford the resources to which we apply, when mucilaginous drinks are required For the last of these articles the results of my practice give a decided preference. I used it freely in this case with the hydrarg. cum creta, as well as in other cases of the same disease. Cold water, in this case, when the patient expressed a preference for it, was freely admitted, as well as in all the cases of fever I have been called upon to treat for the last four years; and I have had no reason, as yet, to regret the practice. Certainly, when the temperature of the mucous surface is exalted so far above that of the normal as to keep the patient repeating his requests for cold water, but little injury can result from the administration of a sufficient quantity to reduce the temperature to the healthy standard; then his thirst will measurably cease. And will not medicines, even calomel, exercise a more favorable impression under such circumstances, than they otherwise could do, upon a surface depraved by a high grade of temperature. Nor have I been troubled with ptyalism as the result of such a course, when some of the preparations of mercury and cold water had been administered together for weeks. But I will digress no farther, and conclude this case by saying, that it terminated in eleven days under the treatment above detailed.

Case 3d.—*History.*—Mrs. H., æt. 21, was taken ill September, 1841. This patient was the wife of a farmer, and as is usual with that class, her habits were of the active kind, with a temperament decidedly sanguine. As in the previous case, the premonitory symptoms of fever had been at work for nearly two weeks previous to the accession of a chill.

Symptoms.—The countenance and attitude, on my first visit, were so slightly altered from the natural, that a favorable prognosis seemed self-evident. As soon however as I saw that the tongue was but slightly coated, and red upon its edges and apex, and with the same protrusion of the papillæ, as

in the cases before related, I was assured that the stomach and bowels were already the seat of incipient gastro-enteritis. But this the sequel more fully established. The skin was rather dry, and above the temperature of the healthy standard; pulse in the morning at 80, in the evening it sometimes rose as high as 95, always regular; the alimentary canal was very susceptible to purgatives, as was evinced from a small one taken before I was called; urinary organs at the accession of the disease not at all deranged, but when it had run about one half its course, the evacuations of the urine became almost suspended; there was tenderness at the epigastrium, and rather preternatural sensibility over the entire surface of the abdomen.

Effects of Remedies.—The patient having taken a mild purgative before I was called, the way was paved for the administration of remedies designed to control the specific lesion. For this purpose the mercury and chalk was administered. At first it seemed to display too much activity, although it was only taken in doses of four grains twice a-day. Modified in this respect by combining each powder with half a grain of opium, its use was continued, with short intermissions, for fifteen days. The intermissions were just long enough to observe, from time to time, what iimpression had been made upon the disease, and what was best calculated to ensure success. In addition, a selected nourishment was allowed, with cold drinks, and infusion of slippery elm. With this management, the patient convalesced on the 18th day.

Remarks.—These cases, as before observed, are about a sample of remittent fever as it has occurred in this region. Were they those of one season alone, they would be less interesting to the practitioner who designs to keep pace with the changes that take place in diseases peculiar to locality. But for the last four years, they have presented about the same characteristics.

In some respects they were similar, while in others, constitution, predisposition, temperament, etc., induced some modification. The reaction in all was of the moderate kind,

without that degree of turbulence or tumultuous action, which would indicate the propriety of depletion. Slight remissions in the morning, which were followed by exacerbations in the evening, were common to them all. I had many cases, however, in which no remissions were perceivable. But the phenomena of the tongue was what held the most universal sway. Seldom a case occurred but what gave evidence of gastro-intestinal irritation by the appearance of the tongue. And when the treatment required for such a lesion was instituted, the issue was favorable; when this was not done, the disease was protracted to an indefinite period, as in the first case detailed. While some others did not get well at all, but terminated fatally with the symptoms of follicular ulceration, or dothinenteritis.

These symptoms bear a strong contrast with those that characterised remitting fever in this region, ten or fifteen years ago. Then, as I am informed by many old and intelligent physicians, who have observed that the fevers of this district have undergone a change, the symptoms were decidedly more boisterous and urgent; such as full, tumid countenance, injected conjunctiva, heat of the general surface, tongue heavily loaded with a white or brown fur, aching pains over the whole system, headache, respiration hurried, pulse frequent and full, and in most cases well marked biliary derangement.

With these symptoms before him, the practitioner formerly went to work with the lancet and purgatives, and if he got a fair start, in nine cases out of ten, he would subdue the disease by the end of the fourth or fifth day.

The most popular purgative was that of calomel and jalap, "*ten and ten.*" In many cases the treatment was commenced with an emeto-cathartic, composed of three grains of antimony, and an ounce of Epsom salts. Failing to yield, after being attacked in this manner, the disease was next approached with calomel alone, or in combination with ipecacuanha. This, with such auxiliaries as were required, was continued until the malady subsided, or the mercurial disease was pro-

duced. These are the leading features of the practice found most successful in subduing the endemic febrile affections of this region, from its first settlement until the period of which I have before spoken.

Success now requires the pursuance of a different course. There being, as a general remark, no indications for blood-letting, the only pretext that can be set up in favor of it, is fashion. True, the reason that it might operate as a prophylactic of visceral congestions has been often urged; but such a course finds little favor in theory, and none in practice. What facts I have gathered are decidedly in favor of economising the resources of the system, of maintaining the integrity of the vital current, until the necessity for its abstraction is decidedly evinced.

Inflammations, we know, are engrafted frequently upon opposite conditions of the general system. Doubtless they occur with most facility where the diathesis is sthenic. But that their advent is much favored by weakening the powers of the *vis medicatrix naturæ* by the process of blood letting, is now so well ascertained, that in fever, more liable to complication than any other general disease, the abstractions of blood should be cautiously performed. These remarks are designed to apply to general blood-letting. Of the value of local depletion, and its comparative superiority in the fevers of this region, I am well convinced. Seldom a case occurs but what it is in demand; and the indications decided, and sometimes even peremptory for its adoption.

Coeval with the many improvements characterising the seventeenth century was the introduction of mercury in the cure of disease. Wavering as has frequently been the confidence of the profession in its utility, in the treatment of fevers, it has now, somehow or other, secured a more general use in the treatment of the autumnal fevers in our own country, than any one remedy with which we are acquainted. From some observation, and a good deal of intercourse with the older physicians of this State, I find that the general use that was formerly made of calomel, found some warrant in

the character of the fevers. This is especially the case in regard to the bilious remittent and intermittent fever, which obtained when the country was first settled, and for some time afterwards; and, indeed, until the greatest of our sources of malaria have, by the improvements of the country, been destroyed.

That, however, calomel obtained a currency and reputation, to which it never had any just claims, is a position that is now about to be confirmed. The reported cases and essays coming out now in such abundance, upon the "*abuses of mercury*," find their best elucidation in a general desire to limit the application of the medicine to its proper bounds.

Considered as a purgative, it is applicable to all the stages of fever, where purging is required. But to its continuation until ptyalism, or its specific effect is induced, I object, as being a practice the utility of which, after all our experience, has never yet been demonstrated. We have not yet ascertained, *whether the fever subsides because of the superinduction of the murcurial disease, or in consequence of having run its course upon the system.* Consulting all the cases where the efficacy of ptyalism in any degree, has been extolled in the treatment of fever, we find much that creates doubt, whether the issue should be attributed to the specific effects of mercury, or the law of self-limitation in the disease. Besides it has been no unusual phenomena in my practice to see a fever continue after the mercurial disease had been produced, just as it had done before. But the reader might wish to know whether the murcurial influence was perfect. I answer, it was; as much so as could have been desired. This has been witnessed so frequently by the practitioners in this region, in treating the fevers of the present day, that the idea of curing them by the specific effect of mercury, is almost wholly abandoned. But this is not an observation of modern times. In his Commentaries upon the Aphorisms of Boerhaave, Van Swieten incidentally mentions a case of quartan ague that continued its course in the midst of a salivation. With the effects of salivation in intermittent fever, and all those generally de-

nominated idiopathic, I have had but little experience. Most of the cases which have fallen under my observation have been what the older nosologists would call symptomatic, supported and sustained by a primary focus or *foci* of irritation. In these, where the irritation was in the bowels, more or less difficulty occurred in bringing the system under the influence of the mercurial disease, in consequence of the purging qualities of the medicine. Seated however in any other part of the system, this was not so much the case.

A ptyalism cures "by the general and permanent stimulant power, by which it induces and keeps up an action that ultimately supersedes the morbid one." (Hunter.) Antiquated as is this explanation, it has, so far as I am acquainted, never been superseded. The cure then, is produced by the stimulant effects of mercury. Vague, too, as is the explanation, when we consider the latitudinarian sense in which the word *stimulant* is used, it is nevertheless more definite than the term *alterant*, as employed to express the same idea by modern writers. Both terms are evidently deficient, because they are *ambiguous*, and may be made to express modes of action of a very different nature. So entirely *general* do they also appear to be, that if we had no other evidence, this would be sufficient to show, that our knowledge of the mode in which ptyalism cures disease is extremely crude. We shall not extend our remarks here any farther, inasmuch as the *modus operandi* would be a matter of but little importance, provided the propriety of attempting to cure fever by ptyalism be sustained either by theory or practice.

"It rarely happens," says M. Hall, "that fever consists in mere febrile movements of the system. There are usually complications with the general febrile state, of affections of the head, chest, and abdomen; and it has long been disputed whether these affections be primary causes, or secondary effects of the fever; and much that is just has been urged on both sides of the question. It is singular that no such dispute has been raised in regard to a class of fevers which I shall designate the eruptive. Yet it appears to me that the rash and

sore throat of scarlatina, and the rash and catarrh of rubeola, and the other complications of these and other febrile diseases, occupy the same rank as the various local affections, whether of function or of anatomy, which we observe so constantly in other fevers." From this, although it is very modest, we conclude that the distinguished Englishman is among those who advocate the doctrine that all fever is symptomatic. To Broussais, more than to any other author, Andral thinks we are indebted for our present enlightened view of the pathology of fever. To seek for the cause of fever in some morbid alteration of some part of the body, to consider fever as a mere symptom of diseased action in some organ, and to direct the treatment against the local affection, and not against the fever which is a mere effect, are parts of the doctrine of Broussais with which Andral was well pleased. "And," says he, "while I agree with Broussais, that every kind of fever may be attributed to a local cause, I think the localization should not be so confined as he has made it."

Various as have been the views, and interminable as has been the discussion of this subject, the opinions of the mass of the profession are still far from being decided. True, the most eminent of the profession in France and England have espoused the side of the symptomatic theory, still there are some things connected with the subject that keep some of us in a state of suspense. No one could doubt for a moment concerning the character of the cases related in this paper. All would agree that from the history, symptoms, and effects of remedies they were symptomatic. No such unanimity, however, could be obtained in regard to the fevers that formerly prevailed in this region; such, for example, as were cured by bark, purging, vomiting, etc. We are aware of the appeals that have been made to morbid anatomy on this score, but so far they are unsatisfactory, and full of ambiguity. Nor can the effects of remedies be invoked with more success. Modified and diversified as is the character of inflammation and irritation from the various organs which may be implicated, we are yet unacquainted with any form of either

that can be cured by the preparations of bark. But with this medicine we very certainly subdue intermittents; and I have been informed by reputable practitioners of the Scioto Valley in this State, that their common practice in the bilious fevers of that region at the present time, is to administer quinine freely as soon as they can get a remission. After having tried all ways to subdue bilious fever in that very malarious district, they find the quinine treatment to be the most expeditious. This information I obtained from Drs. Brown and Griswold, of Circleville. Besides positive, negative evidence is not less abundant. Who would think of making himself useful, or sustaining a reputation in the treatment of intermittent and bilious remittent fevers, by trusting to the effects of remedies addressed to an irritation of the alimentary canal, or to an irritation in any other part of the system?

The fact is that formerly most of the fever that prevailed in this region was idiopathic, now it is generally symptomatic; and the prevailing lesion is in the mucous surface of the alimentary canal, gastro-enteritis. About four years ago, a typhoid epidemic fever prevailed here, in every case of which, there was decided evidence of irritation in the mucous membrane of the bowels. Since the prevalence of that epidemic, almost all the diseases seem to be prone to be complicated with a similar anatomical condition. Pneumonia, hepatitis, and synochus fever, are much more liable than formerly to run into gastro-enteritis, and by this means have their course much protracted. Hence the character of our diseases is different now, from what it was in former times. Now they would do very well by which to sustain the doctrines of Broussais. Formerly they would have supported, in an equally decided manner, the views of Dr. Smith.

June, 1843.

REVIEWS.

ART. III.—*Physiology Vindicated, in a Critique on Liebig's Animal Chemistry.* By CHARLES CALDWELL, M.D. Jeffersonville, Ia: A. Spaulding Tilden, 1843. pp. 95, 8vo.

Professor Caldwell is a ready and copious writer. His prolific pen, in the course of a long and industrious life, has been employed in the discussion of most of the leading topics belonging to physiology. It has fallen in our way to have to speak of many of these productions, and generally we have been as forcibly impelled by a sense of justice, as predisposed by our feelings of personal regard for their author, to speak of them in terms of decided approbation. But in the present instance our language must be different, and on that account the task of reviewing the "Critique" is one which we assume with no pleasure. If we could have pronounced it an able paper, though coming short of its aim; if, among its numerous arguments against animal chemistry, one solid objection had been adduced; if the author had even succeeded in pointing out the defects which, undeniably, attach to the doctrines of Liebig, we should have felt pleasure in laying before our readers all that could be urged against those popular theories by one of the most learned physiologists of our country. But after a most careful examination of what Professor Caldwell has written in this work, we cannot admit that he has set forth a single valid reason, why the chemical theories of animal heat and digestion should not be adopted. The argument

evinces the learning and research, which we had a right to expect, and it is proposed with an earnestness which shows that the author had a deep conviction of the soundness of his opinions, but it will surprise us if any one, who has studied the writings of Liebig, and is acquainted with the subjects in dispute, deems it so much as plausible. Whatever of force the objections urged might have had in the time of John Hunter, it is not hazardous to say, that by the great body of physiologists they are now regarded as obsolete.

We have admitted the sincerity of Dr. Caldwell in all the opinions advanced in the "Critique," but, in very truth, if we did not know that he is not given to irony, we should strongly suspect him of experimenting upon the credulity of his readers in the following paragraph:

"Convince any man, however high his political and social rank, and his influence among his fellows, that he is nothing but an aggregate of oxygen, nitrogen, carbon, and hydrogen, and a few other lifeless ingredients, put together, fashioned, and held together, by the same affinities, and governed, in the performance of his functions, by the same laws that preside *in* and *over* masses of dead matter—convince *any* man of this, and you necessarily diminish his self-respect, and render him comparatively indifferent to his actions, and regardless of his destiny. Convince mankind at large of this, and you brutify them. Degraded in their own estimation, and approximated in their belief to masses of brute matter, their feelings and conduct will conform to their view of their humbled condition. For, that a sense of high and honorable descent and condition influences morals and actions, as well as manners and bearing, is a maxim as true as any other that belongs to the history and philosophy of man." p. x.

The poet has it,

> "For women are like tricks by sleight of hand,
> Which to admire you must not understand;"

but the learned author of the "Critique" carries the idea much further. He insists that men not only will not "admire" themselves if they get to understand the stuff they are made of, but will be "brutified" by the knowledge. To quote his own words,

"Not only is chemical physiology physically groundless; it is morally pernicious. Chemical physiology and pathology, and chemical practice, the result of them, have slain their millions. From them have arisen the unspeakable mischiefs and miseries of humoralism." p. xi.

We quote these passages, not with any intention of commenting on the sentiments, but to show the spirit and manner in which Professor Caldwell resists the application of chemical philosophy to the functions of animals. No comment can be necessary. The reader has but to turn to any modern book on physiology, for a satisfactory reply to all such objections and denunciations as these. So we proceed, without further preface, to the main argument of the "Critique"—that directed against the chemical theory of *animal heat.* That theory is thus briefly stated by Liebig:

"The mutual action between the elements of the food and the oxygen conveyed by the circulation of the blood to every part of the body, is the source of animal heat." *An. Chem.* p. 17.

"To make use of a familiar, but not, on that account, a less just illustration, the animal body acts, in this respect, as a furnace, which we supply with fuel. In order to keep up, in the furnace, a constant temperature, we must vary the supply of fuel according to the external temperature: that is, according to the supply of the oxygen.

"In the animal body the food is the fuel; with a proper supply of oxygen we obtain the heat given out during its oxidation or combustion." *Ib.* p. 20.

"Those animals which respire frequently, and consequently consume much oxygen, possess a higher temperature than others, which, with a body of equal size to be heated, take into the system less oxygen. The temperature of a child (102°) is higher than that of an adult (99.5°). That of birds (104° to 105.4°) is higher than that of quadrupeds (98.5° to 100.4°), or than that of fishes or amphibia, whose proper temperature is from 2.7° to 3.6° higher than that of the medium in which they live." *Ib.* p. 18.

Such is the theory of animal heat proposed by Liebig, some parts of which he owes to former chemists, but which was never presented in so perfect a shape as it appears in his admirable work. Dr. Caldwell regards it as an entire failure.

We shall examine his reasons for this belief, one of which is stated in the following extract:

"During the hottest period of hot climates, the heat, wasted by the human body, through atmospherical influence, does not amount, on an average, to more than 5°, perhaps not so much. That quantity, therefore, and no more, must be supplied by the calorific process of the system.

"But, during the winters of the frozen north, the heat, abstracted from the body of man, by atmospherical agency, amounts, not unfrequently, to from 140° to 150°. This is from twenty-eight to thirty times as much as is abstracted under the influence of tropical heat. In such a case, therefore, the calorific process must supply that amount, else the temperature of the body will sink. And our author states, with confidence, the means by which, in his opinion, the calorific effect is produced. Let us, by a severe, but fair, examination, facts being its basis), endeavor to ascertain whether the means referred to, and relied on, by him, are competent to the phenomenon in question?

"Our author alleges, that, in the polar climates, especially during the rigors of winter, man inspires and mingles with his arterial blood, a much larger amount of oxygen, than he does in tropical climates, during the same, or any other, season of the year. And he further alleges, that in the former case, he also swallows, as his food and drink, converts into chyle, and, in like manner, mingles with his *venous*, to be converted into arterial blood, a much larger amount of carbon and hydrogen, than he does in the latter." p. 12.

"Admitting that each hyperborean adult swallows, every day, from ten to fifteen pounds of oily food and drink (against the credibility of which, however, we are compelled to protest), it must be acknowledged, that such a mass of grease conveys into the systems of those who indulge in it, no inconsiderable amount of carbon. Yet do we pronounce that amount far from sufficient to produce the effect essential to the support of our author's hypothesis. It is not, we mean, equal to twenty-eight or thirty times the quantity of the same article that passes into the bodies of the inhabitants of tropical climates. Yet to sustain the notion we are examining, such ought to be the case. The evolution of twenty-eight or thirty times the amount of caloric requires, of course, in the same sort of process, twenty-eight or thirty times the amount of the article from which it is evolved." p. 13.

If the inhabitants of these opposite regions were clothed

and lodged alike, there would be force in this argument, but the point of it is destroyed by the fact, that the people of the north compensate, in a great measure, by thick clothing and warm houses, for the absence of the heat of southern latitudes. In northern climates the study of men is to aid the calorific power of their bodies. Every thing is arranged for economising heat. The ice-huts of the Esquimaux were found by Capt. Parry to have a temperature only a few degrees below the freezing point of water, and in these they pass most of their time during the cold season. Instead then of 140° or 150°, the difference between the temperature of the hyperborean's body and that of the medium in which he lives, rarely exceeds and then only for a short time, 68° or 70°; and while he protects himself by furs and the warmest vestments, when exposed to the open air, the inhabitants of warm countries seek a reduced temperature in airy houses, shade, cooling drinks, which favor perspiration, repose, and light clothing. No process cools the body so rapidly as evaporation of the perspirable matter, which flows freely under the influence of a vertical sun, and must be very trifling amid the frosts of a northern winter.

Then, as to the fact that men exposed to cold consume more food, if they can obtain it, and food of a richer quality, it admits of no question. Every one experiences it in his own case. The appetite is proverbially sharp on a frosty morning. We relish a generous animal diet in winter for which we have but little desire in warm weather. Every farmer knows, that his cattle must be better fed, as the cold increases in severity, and that shelters and warm houses compensate for a certain amount of food. "He who is well fed," says Sir John Ross, (*Narrative*, p. 200), resists cold better than the man who is stinted, while the starvation from cold follows but too soon a starvation in food. This, doubtless, explains in a great measure the resisting powers of the natives of these frozen climates; their consumption of food, it is familiar, being enormous, and often incredible." The same traveller asserts, that "an Esquimaux will eat twenty

pounds of flesh and oil daily." Captain Cochrane, in his Narrative of a Journey through Russia and Siberian Tartary, states that a calf, weighing about two hundred pounds, "may serve four or five good Yakuti for a single meal," and he declares that he has "repeatedly seen a Yakut or Tongouse devour forty pounds of meat a day." He adds, that he has seen "three of these gluttons consume a reindeer at one meal."

Certainly, here is an ample provision of fuel for the generation of all the caloric required by these people. Whether it be that the "gluttons" are impelled to such feats by a large organ of "*alimentiveness,*" or by the instinct of providing fuel for the oxygen they consume, the fact is beyond dispute, that they cannot subsist without "the large use of oil and fat meats, becoming diseased, and dying, with a more meagre diet." (Sir John Ross' *Narrative,* &c.) A diet of such rich articles, observes the same writer, is proved by "all experience to be the true secret of life in these frozen countries."

Dr. Caldwell objects to Liebig, that he does not tell the source whence the natives of the north derive the hydrogen necessary in this process of combustion. The following are his words:

"From what source our author derives his extra-abundance of hydrogen to super-saturate with it the systems of the polar tribes, he does not inform us; and we forbear to inquire. He cannot supply himself with it from the quantity of water those people drink, which we believe to be far inferior to the quantity used by the inhabitants of hot and temperate climates. The latter people, therefore, ought to be much more heated by the combustion of hydrogen in their systems than the former. Yet, the more substantially to fortify his hypothesis, the Professor ought to be prepared to show that the systems of those people, which are so deeply *carbonized*, are also somewhat *hydrogenized*. This condition of them would be the more expedient and useful to him, seeing, as he correctly informs us, the combustion of hydrogen evolves much more caloric, and produces, therefore, a more intense heat, than the combustion of carbon."

This is an unlucky paragraph to occur in a critique on a

work relating to chemistry. It was not wise in the author of the Critique to "forbear to inquire," so soon, whether the food of the arctic people might not contain a liberal supply of hydrogen. If he had taken the trouble to consult some elementary treatise on chemistry, he would have learnt that fat animal matters are rich in that substance; or, without going out of the work he was criticising, a little care would have apprised him of Liebig's doctrine, "that it is especially carbon *and hydrogen*, which, by combining with oxygen, serve to produce animal heat." (*Animal Chem.*, p. 23).

Having shown, that the diet of the natives of cold regions abounds in matters fitted for combustion, the next question is, as to the source of oxygen. Dr. Caldwell thus states Liebig's positions in regard to the matter:

"His surplus-supply of oxygen, for the systems of the north-men, our author derives from two several sources, which may be thus stated. 1. A given volume—say a cubic foot—of a cold and dense polar atmosphere, contains more oxygen than an equal volume of a warmer and rarer one, of a temperate or tropical climate. 2. The acts of inspiration in a given time—say a minute—being equally full, are more numerous in a cold climate, and in cold weather, than they are in a temperate or a hot climate, or in temperate or hot weather, in any climate." p. 16.

As respects the first of these positions Dr. C. agrees that Liebig is right; the second he "unhesitatingly pronounces unsound." But on what facts does he rest the assertion? Upon none, except that he "thinks that his pulse-beats in common with his acts of inspiration, are rather less frequent in cold than in hot weather." And perhaps this is true, sitting in his warm parlour. But how stands the case with the people of cold climates, who are urged by their necessities to laborious efforts in the open air? Is it probable, that their "pulse-beats and acts of inspiration" are fewer than those of their brethren at the South? The case is too plain to admit of dispute. The active habits of Northern people, their energy, the inexorable necessity for great exertion in cold climates to supply the demands of nature, are facts universally

known. And there cannot, therefore, remain in any mind a question, that both in the frequency of their inspirations, and in the quantity of air inspired each time, the nations of the North receive more oxygen than the inhabitants of Southern countries.

The author of the "Critique" proceeds:

"But other people, besides the fat-meat and fat-fish-eating, and oil-drinking Esquimaux, Samoyedes, and Laplanders, inhabit cold countries and climates, retain in them their temperature, enjoy excellent health, and acquire corresponding degrees of strength and activity. And they do all this with but a meagre supply of animal food, either fat or lean, or of any other sort of oleaginous diet. Nor are their clothing and dwellings by any means of the warmest description." p. 17.

It is manifest from this objection, that its author has not made himself acquainted with Liebig's theory of nutrition and animal heat. The argument rests upon the assumption, that an "oleaginous diet" is indispensable for the supply of the carbon and hydrogen which, according to that theory, are concerned in the combustion of which the heat of the living body is the result. But this is not the fact. "Man," says Liebig, "when confined to animal food, requires for his support and nourishment extensive sources of food,"—five-fold more extensive than when he is furnished with a mixed diet, and for the reason, that "fifteen pounds of flesh contain not more carbon than four pounds of starch." And so the savage, who, with one animal and an equal weight of starch, is now able to maintain life and health for a certain number of days, would be compelled, if confined to flesh, in order to procure the carbon necessary for respiration, during the same time, to consume five such animals. (Liebig, p. 74). What, then, becomes of this objection? It is admitted that the serfs and peasantry of the north of Europe, have "milk and cheese," and bread composed of "rye and oaten meal," and this is all that Liebig's hypothesis demands. In these substances is the most ample supply of hydrogen and carbon. They are the very articles to furnish the elements for combustion; and thus, it turns out, that "the serfs and peasantry of

Russia are," not only not "very scantily," but most abundantly, supplied with Professor Liebig's "*carbonaceous* food."

"We shall here extract," says Professor Caldwell, "from Animal Chemistry, p. 21, another passage, to show the wild and lawless extravagance, in which our author indulges his system-building fancy.

'Our clothing is merely an equivalent for a certain amount of food. The more warmly we are clothed, the less urgent becomes the appetite for food, because the loss of heat by cooling, and consequently the amount of heat to be supplied by food, is diminished.' "

"Of this extraordinary paragraph, the true and literal interpretation is, that we eat, not so much that we may be *nourished* by our aliment, as that we may be *warmed* by it. Consequently, be the temperature of the atmosphere around us what it may—at the freezing point—at zero—or forty degrees below it—provided we swallowed a sufficient amount of food, we may dispense entirely with the use of clothing. In plain English, we may go naked through the most intense degree of cold that can be produced by a frosty atmosphere, and a snow-covered earth, co-operating with the iciest blasts from the pole, and still be sufficiently warm for health and comfort!! Why? Because, if it be true, as Professor Liebig assures us, that 'Our clothing is merely an equivalent for a certain *amount* of food," it follows, of necessity, that that same amount of food is an equivalent for clothing. This conclusion is as certain, as it is that, "things equal to one and the same thing are equal to one another." Only swallow, therefore, a sufficient quantity of bacon, lard, butter, and other sorts of grease, and you may dispense with the cost and the encumbrance of clothes!

"Again, if, according to our assurance from the same authority, it be a fact, that 'the more warmly we are clothed the less urgent becomes our appetite for food;' it follows, of course, that in case our clothing be sufficiently warm, our appetite for food will be entirely extinguished." p. 20.

The best answer, perhaps, that could be given to all this are a few facts resting upon experiment. It is known, for example, that two hives of bees do not consume so much honey when together as when separate, because the warmth is greater. Again, a hundred sheep were placed by Lord Ducie, in a warm shed, and ate twenty pounds of Swedish

turnips, each, a day; another hundred kept in the open air consumed, each, twenty-five pounds of turnips daily; yet at the end of a certain period the sheep which had been protected, although they had a fifth less food, weighed three pounds a head more than the unprotected sheep. (Playfair's Lecture before the Royal Agricultural Society of England). From the same paper we derive these additional observations: "During the late riots in Lancashire, the poor unemployed operatives found out that exercise and cold made them hungry; accordingly they kept quiet in bed, and heaped upon them all the covering they could find. Five sheep were fed in the open air between the 21st of November, and the 1st of December; they consumed ninety pounds of food daily, the temperature of the atmosphere being about 44°. At the end of this time they weighed two pounds less than when first exposed. Five other sheep were placed under a shed, and allowed to run about at a temperature of 49°; they consumed at first eighty-two pounds a day; then seventy; and at the end of the time had increased in weight twenty-three pounds."

Could any thing be more conclusive than these experiments? With the supply of warmth from without, the demand for food to generate heat within diminished. But it does not follow, because clothing is an equivalent for a certain amount of food, that, therefore, it might be made to supersede the necessity for food altogether. A man may live upon little, says the proverb, but he cannot live upon nothing at all. A portion of our food, according to Liebig, is consumed in the production of animal heat. Diminish the demand for animal heat, by external warmth, or by clothing, and you diminish, to that extent, the necessity for the kind of food which is concerned in the evolution of animal heat. But you do not, thereby, extinguish the appetite for all food. The author of this objection would have learnt, if he had read Liebig more attentively, that the food of animals consists of two classes; one of which is strictly nutritive, forming blood and supplying it with the elements for the various

vital tissues; the other affording the "elements of respiration," or matters to be oxidized, and so, by a slow combustion carried on in every living part, maintain the animal temperature. And he would have seen the injustice of the caricature he has drawn in his attempt to ridicule Liebig upon this point.

The various savage tribes cited by Professor Caldwell, furnish nothing, in their modes of living, contradictory of the theory he opposes. Those of the North subsist upon "venison, fish, Indian corn, and wild rice," from which they derive the necessary "fuel" to sustain their vital heat; and those races inhabiting tropical countries who, nevertheless, are voracious feeders, pursue lives of great activity, thus consuming, or, as expressed by Liebig, "oxidizing" the carbon and hydrogen which, otherwise, would accumulate as fat upon their bodies. Not one fact, in all the cases adduced, but is in perfect harmony with the view, that animal heat results from the union of the elements of the food with the oxygen imbibed in respiration, and that those elements when in quantities disproportioned to the oxygen respired go to form deposits of fat. In the body of the Arab, of the Indian, of the fox, or of the stag, such deposits do not occur, because the food convertible into fat is oxidized by their active respiration—the fuel is burnt up, and that which loads the hog or lazy alderman with fat, escapes from their systems in the form of carbonic acid and water.

The agency of the nervous system in the maintenance of animal temperature, Dr. Caldwell thinks, is not sufficiently recognised by Liebig. He states the case thus:

"Destroy or paralyze the nerves which supply one arm and hand, the circulation of the blood through them continuing, and their temperature will fall several degrees below that of the corresponding limb. Of the lower extremities the same may be said. If the nerves of either of them be seriously deranged, its temperature will decline.

"Paralyze, or seriously injure, the *nervus vagus*, and of all the parts of the body through which it is distributed, the temperature soon and considerably sinks. Nor, in the parts

whose nerves are thus deranged, is nutrition carried on to its usual extent; and hence the organs decrease in size. Yet to chemical action does our author ascribe nutrition as well as calorification." p. 24, 25.

Liebig holds calorification to be a chemical process, but one to which nervous influence is necessary. The nerves, once for all, he admits, are essential to all vital actions. Under their influence, the viscera produce the compounds which give rise to animal heat by their union with oxygen. But these compounds are not evolved when the nerves are paralyzed, and the combustion must consequently cease. The nerves being indispensable to the supply of the fuel, it must happen when they are injured that the animal temperature will decline, for the conditions of the chemical action are no longer present. Fuel to be consumed, is as essential as oxygen to consume it, and the cutting of the spinal cord, or of the par vagum, effectually cuts off this supply.

The author of the "Critique" and Liebig are at issue as to the relative temperature of the child and the adult, but here, as usual, the evidence is on the side of the German Professor.

"In infants," says Dr. C., "the lungs are larger, in proportion to the bodies that contain them, than in adults. In the same proportion, therefore, they receive, by each inspiration, a larger quantity of atmospherical air. Their acts of inspiration are also more frequent, and therefore, more numerous in a given time, in the proportion of about 27 or 28 to 19 or 20. Hence, according to our author's hypothesis, the temperature of infants ought to be higher than that of adults. And the gentleman asserts that it is so." p. 26.

Dr. John Davy, (*Researches*, p. 287, 1840), found the temperature of young animals higher than that of animals arrived at maturity. He cites, particularly, observations on infants made by himself. In one instance, he found the heat under the axilla of a child just born 98.5°; after twelve hours 99°, and after three days the same, appearing all the time in perfect health. On five other children of the same age, he made similar observations. In two instances, he says, when the infants were weak, the temperature, one hour after birth, was found not to exceed 96°, which is 2° below

the standard of man in health; but their respiration, he adds, was still languid, and the next day the heat of the axilla had risen in one to 98.5°, and in the other to 99°. These observations are conclusive as to this point, nor are they opposed to the results obtained by Edwards in his Researches on Animal Heat, whose inference from all his experiments is, that the small development of heat in the young of carnivorous and rodent animals is due to their small consumption of oxygen. He found, for example, that young sparrows, in which the temperature was lower than in grown sparrows, consumed air much more slowly. And in the young of dogs, cats, and rabbits, which are born blind, and with the respiratory function incomplete, the calorific process was shown to be much less active than in the young Guinea-pig, which can run about and pick up food as soon as it is born. This is in accordance with what is known of the young of the human species. The fœtus, during intra-uterine life, derives its heat from its mother, and the child born prematurely is with difficulty kept warm. In one, respiration has not commenced, in the other is performed inadequately, and in both, as in those children who labor under the *morbus cæruleus*, the facts harmonize perfectly with the chemical theory, that the temperature is in proportion to the extent and activity of the respiratory process. The writings of physiologists abound with evidence to the same point, as the following from Müller: that the larva, in which the respiratory organs are smaller in comparison with the size of the body, has a lower temperature than the perfect insect; that flying insects, which have the largest respiratory organs, have also the highest temperature—and that, among terrestrial insects, those produce the most heat which have the largest respiratory organs and breathe the most air. Nothing more is contended for by Liebig, whose words are, that "the temperature of the child is higher than that of an adult;" and, "a child, in whom the organs of respiration are in a state of great activity, requires food oftener than an adult, and bears hunger less easily"—not, so far as we have been able to find in his Animal Chem-

istry, that infants are less affected by cold than adults, nor, that the babe may survive the cold by which the mother is frozen to death.

The allusion of the "Critique," in connexion with this subject, to the hybernation of animals, was rather unfortunate, for all the phenomena presented by that state go to support the hypothesis of Liebig. Hybernating animals, when not in a state of torpor, have generally a temperature about as high as that of other animals, but during their sleep the heat of their bodies declines to within four or five degrees of that of the surrounding medium, several of them becoming even frozen at 10° of Fahr. And in this state, what is the condition of their breathing and of their circulation? Respiration is slow, and, at last, almost imperceptible. The marmot during hybernation breaths only seven or eight times in a minute, the hedge-hog four or five times, the great dormouse nine or ten times in the same period. But during the state of the deepest torpor, respiration entirely ceases. *Müller*, p. 77. Sassy found, that the quantity of oxygen consumed, decreased as the temperature of the animals fell; and he found, also, that the motion of the blood in the state of torpor was extremely slow, it being only in the larger vessels that an undulatory motion of this fluid was observable. In the bat, during hybernation, the heart beats but twenty-eight, or, at most but fifty-five times in the minute, while ordinarily it beats two hundred times in the same interval.—*Ib.* p. 78. The temperature of the hedge-hog and dormouse, in their torpid state, was found by Edwards to be 37°, their respiration being scarcely perceptible. When they were roused from their sleep, by mechanical excitement, their breathing became full, and their temperature, in the same cold room, rose in a short time to 86° and 97° Fahr. From all of which, what is the inference? Obviously, none other than that drawn by Edwards, that "increase of respiratory movements and the restoration of heat, stand related as cause and effect." *Edwards on the Influence of Phys. Agents*, &c. p. 97.

The author of the "Critique" is very severe on Liebig's philosophy of starvation. He thinks it is "ludicrous." It may not be amiss to state what that philosophy is.

The first effect of starvation, as every body knows, is the disappearance of the fat of the body, and as the most carefully conducted experiments have shown that it does not pass off by other emunctories, Liebig holds that the hydrogen and carbon of which it is composed are given off through the lungs and skin, in the form of carbonic acid and water. "In the case of a starving man," says he, "32½ oz. of oxygen enter the system daily, and are given out again in combination with a part of his body," and he refers to the case reported by Currie of an individual who was unable to swallow for a month, owing to a schirrous tumor in the œsophagus, and who in that period lost one hundred pounds, and to that of a fat pig overwhelmed in a slip of earth, which lived one hundred and sixty days without food, and was found in that time to have lost one hundred and twenty pounds, to prove that it is the fat which is first oxidized. Dr. Willan reports a similar case. A young man lived fifty-one days upon water with a little orange-juice squeezed into it. Dr. Willan saw him on the sixty-first day of his fast, when his appearance suggested the idea of "a skeleton prepared by drying the muscles upon it in their natural situations." His mind had become imbecile, and he died frantic and exhausted on the seventy-second day from the commencement of his abstinence. He partook of food for several days before his death, but his emaciation continued to increase. In Currie's case the mind was likewise affected, as, indeed, it always is near the approach of death from starvation.

"In the progress of starvation," continues Liebig, "it is not only the fat which disappears, but also, by degrees, all such of the solids as are capable of being dissolved. The muscles are shrunk and unnaturally soft. Towards the end, the particles of the brain begin to undergo the process of oxidation, and delirium, mania and death close the scene." *An. Chem.* p. 25.

This is what our author styles "a ludicrous perversion of

the philosophy of starvation," which he attempts to set aside by the following questions:

"On what foundation, and of what materials has Professor Liebig erected his hypothesis? Have their solidity and soundness been thoroughly tested by him? Has he ever analyzed the brain of a person destroyed by famine? If so, has he detected in it a greater amount of oxygen, united to the cerebral matter, than is to be found in the brains of those who had become deranged from any other cause?—or even in the brains of those who had not been deranged at all? If he has not effected such analysis, and made such detection, or found some other authentic evidence in support of his belief (and we are not apprized of his having done either), he is not only unjustifiable, but amenable to censure, for hazarding the assertion." p. 31.

Considering that this critique is avowedly chemical, the passage just quoted is certainly a curious one. Assuredly, the last thing a chemist would expect to find in an oxidized brain, is an excess of oxygen. He knows, that the oxygen has passed away in combination with the carbon and hydrogen of the cerebral matter. Would the author of the "Critique" look for a greater amount of oxygen in the fuel, which is wasting away by oxidation, in his fire-place? He must know, that the process of oxidation, in all such cases, involves the escape of oxygen in a gaseous form. We have ventured upon these brief hints not without misgivings, that we were explaining what was already familiar to every reader.

The objections to this theory of starvation are stated in the following sentences:

"The Professor confidently states, (indeed his hypothesis compels him to state), that, in the bodies of persons destroyed by starvation, the whole of the fat they contain is necessarily burnt out before they die; and that, of course, the greater the quantity they possess of that substance, the longer they live under the torturing privation.

"This is at once a mistake and mis-statement. And it convinces us that either our author is not at all times a correct observer; or that, touching the matter we are now considering, he has had no favorable opportunity to observe. An in-

dividual abounding in fat, does not live longer under starvation, than one who does not so abound. Confirmatory of this is the result of observation and experience, as attested by the reports of those, who have witnessed death from starvation, in cases of shipwreck. In such disasters, provided they are equally healthy and vigorous, the lean live as long as the fat, the cheerful and active longer than the dejected and indolent, the firm, resolute, and high-minded, longer than the timid, unresisting, and feeble-minded, and those in the prime of manhood, or still more advanced in life, longer than the youthful—especially than children.

"On this topic we shall further remark, that those who allege (and there are many such), that, under starvation, fat persons outlive lean ones, *because their fatty matter is absorbed and converted into nourishment for them*, are as deeply mistaken in *their* notion, as Professor Liebig is in *his* respecting combustion. We repeat, that fat subjects, when deprived of food and drink, do not live longer than lean ones, for any reason. And we also repeat, that death from starvation is not the result of either *inanition* or *combustion;* but of a *malignant fever*. Nor is it irrelevant to our purpose to subjoin, that, under starvation, those individuals of the inferior animals, that abound in fat, do not live longer than those of the same species that are lean—provided they are alike in all other respects. Experiments to this effect, we have ourselves not only witnessed, but also repeatedly and carefully performed. We therefore speak on the subject with confidence. Nor can aught but a counter-result of experiments, equally well devised and performed, convince us that we are mistaken. We must here remark, however, that the animals experimented on by us, were in no instance actually *destroyed* by starvation. The cruelty of the experiments forbade our pushing them to that extreme. The animals were only so far debilitated as to be *unable to stand. And the fat ones were as much enfeebled as the lean.* On their aliment moreover being restored to them, the latter recruited as rapidly as the former." pp. 32, 33.

"Fat subjects," it is contended, "when deprived of food and *drink*, do not live longer than lean ones;" nor does Liebig say that they do. The time required to cause death by starvation, depends, he says, "on the amount of fat in the body, on the degree of exercise, &c., and on the *presence or absence of water*." We have cited cases in which, water

having been used by the sufferer, death did not occur till after the lapse of twenty and sixty days; and the poor Lancashire operatives experienced, that keeping quiet in bed blunted the cravings of hunger. These facts are strikingly coincident with Liebig's "philosophy of starvation," as indeed, are all the facts in our knowledge bearing upon the question, except the experiments reported in the last paragraph above, in which there is much reason to suspect some inaccuracy. Probably the animals were not plentifully supplied with water. But whatever may have been the caution with which they were conducted, we apprehend it will be difficult for the author of them to convince any practical farmer, that his lean pigs will endure starvation as long and as well as the fat ones.

Upon Liebig's hypothesis, it is insisted, that persons with large chests, and who at the same time are full and rich feeders, ought to possess a higher temperature than those of an opposite configuration. No doubt, their power of resisting cold ought to be superior. But, continues the objector,

"Small chested and lunged individuals and sparing eaters of plain and even vegetable food possess a temperature as high as those do, whose chests and lungs are of the largest size; and who eat abundantly of an oily diet." p. 33.

Now, what does experience teach regarding this matter? Our appeal shall be again to practical men—to agriculturists and travellers; and we ask, whether the observation is not universal, that individuals with the largest chests and sharpest appetites, other things being alike, endure fatigue and cold the best? Such, unquestionably, was the observation of Parry and Ross, in their Arctic voyages, and such has been the experience of every man who has had to encounter extreme degrees of cold. We see it every day in man and the inferior animals. A good digestion, and an ample supply of oxygen are the conditions of a high temperature. In syncope, the morbus cœruleus, and dyspepsia, the power to generate heat is low; in the last, because the fuel is insuffi-

cient, and in the former two, because there is not an adequate consumption of oxygen.

From patients afflicted with hydrothorax, fevers, pleurisy, and consumption, our author thinks he derives yet stronger testimony against Liebig's hypothesis. In such persons, he remarks, while their respiration is limited, their temperature is not unfrequently increased to febrile heat. But he overlooks the obvious fact, that in these diseases if the breathing is limited it is also much more frequent, and that perspiration being suppressed, evaporation, the great cooling process of the body, is consequently suspended. Müller (*Physiology*, p. 81), admits this to be the cause of the intolerably hot skin in fevers. Carpenter (*Human Physiology*, p. 554), refers the painful heat of the skin, often present in phthisis, to the extremely rapid inspirations which necessarily attend the disorganization of any considerable portion of the lungs. An increased temperature is what ought to occur upon this hypothesis. Apart from the circumstance that evaporation does not take place, the oxidation going on in the body, as shown by the rapid emaciation, ought to develope quite the usual amount of heat. The cooling process being annulled, the temperature might be expected to rise, as it has sometimes been seen in scarlet fever and tetanus, to 106° or 110¾°.

The economy of certain animals is referred to by the author of the "Critique," as subversive of the combustion-theory. Whales, for example, it is said, devour great quantities of food, and yet respire but once in fifteen minutes, but maintain, nevertheless, in northern seas, a temperature of 102°. The anaconda, too, is a voracious feeder, but has a respiration very much restricted. All the serpent tribe, in fact, it is urged, offer this peculiarity.

"Some of that tribe, moreover, if not all of it, possess another peculiarity openly and irreconcilably at war with the notion of Professor Liebig. They are capable of living *months we know*, (and we are assured, on authority we know not how to discredit, or even question, that the term may be

extended to *years*), in a state of entire abstinence from food, and of still maintaining their *ordinary temperature.* Nor are they materially reduced in weight by the privation. To invite the disciples of Professor Liebig to reconcile this fact to the combustion-hypothesis of that teacher, might be regarded in the light of an unnecessary taunt. We, therefore, forbear to offer it—leaving them at liberty to attempt or decline the task at their option." p. 35.

We do not doubt, that these examples strike the mind of our author as exceedingly hostile to the hypothesis he is opposing, but we assure him, that they are among the facts upon which Liebig rests his theory. To our minds, indeed, the harmony between this theory and the economy of these animals is perfect. The anaconda devours large meals, it is true, but his rule of feeding, we believe, is the reverse of "*little and often.*" If his meals are hearty, they are far between. After one of his sumptuous repasts, he will go three months without food, and our author thinks "the term might be extended to years." In other words, he comes as near living upon nothing as most animals; and then his lungs are small, and his breathing slow. He is a small consumer both of oxygen and food, and his temperature, as we have seen, in common with that of the serpent tribe in general, is but 2° or 3° higher than that of the surrounding atmosphere. And is not this precisely what the "combustion-hypothesis" requires?

Whales are warm-blooded, and must maintain their independent temperature against a medium which abstracts caloric rapidly. They ought, therefore, to be protected against the cold water by some vestment which conducts heat imperfectly, and be endowed at the same time with organs for developing much animal heat. And so we find their organization. They are large feeders, and although they do not respire often, it does not follow that they are therefore not large consumers of oxygen, the absorption of which, by the lungs, must go on uninterruptedly. The temperature of the animal does not bear any fixed ratio to the number of respirations, in a given time, but to the quantity of oxygen imbibed into

the system, and the quantity of carbonic acid exhaled. Thus the horse whose temperature is 98.2° breathes but sixteen times in the minute, while the dog, with a temperature of 99.3°, or one degree higher, breathes twenty-eight times in the same period; man, whose temperature is 99°, breathes eighteen times a minute, but the simia callitriche whose temperature is 95.9° has thirty respirations in the same time; and, more strikingly, the lark breathes but twenty-two times in the minute, while its temperature is 117.2°, being 19° higher than that of the horse, while the number of its respirations is only six more, in the minute. The whale consumes oxygen enough to maintain his vital heat, but not enough to oxidize the whole of his food. Much of that portion of it which is composed of carbon and hydrogen goes to create those deposits of fat, the blubber, which constitute his clothing. If he breathed more oxygen, and consumed all the fuel, such accumulations could not occur, and he would be no longer protected by this admirable inner garment, against the cold of the ice-bergs amid which he passes his life.

The next appeal of the objector is to birds. He remarks,

"As we have long believed, a notion is very generally, if not universally, entertained, respecting the cause of the high temperature of birds, which is not only erroneous in itself, but calculated to infuse error into the whole doctrine of animal heat.

"The temperature of those animals is known to be several degrees higher than that of man, and of quadrupeds. And this superiority in height is attributed to the *supposed* superiority in the extent of their lungs. We say the "supposed superiority;" for we are far from being convinced that it is *real*. On the contrary, we believe that it is not." p. 36.

This is easily answered. The permeability of the bones of birds by the atmosphere being admitted, the chemist asks no more. He knows that the air, once in contact with the moist animal membrane, has no difficulty in reaching the circulation. It does not obviate the difficulty, denying that

these air-tubes are part of the true respiratory apparatus. It is enough that oxygen finds its way into them. Even conceding to the objector what all physiologists and anatomists indeed deny, that the respiratory organs of birds are not more extensive than those of the mammalia, the admission avails him nothing, for the truth still remains undisputed and incontrovertible, that more oxygen is consumed, and more carbonic acid generated by birds, in a given time, than by any other class of animals. The quantity formed by cold-blooded animals being as one, by the mammalia it is ten, and by birds nineteen. The mammiferous animals generate fifty times, and birds nearly a hundred times, more than fishes. *Müller*, p. 297–'9. This is all that the supporters of the chemical theory could desire, and thus the conclusion seems to be forced upon the mind, that circumstances so invariably connected as a large, active respiratory apparatus, and a high animal temperature, sustain to each other the relation of cause and effect.

The anaconda and the whale, man, beasts, birds, and fishes having been made to testify against the "combustion-hypothesis," the critique finally calls upon the trees to speak. We are assured that,

"The vegetable kingdom also, abounds in facts in direct opposition to our author's hypothesis. During all the vicissitudes which occur in the atmosphere, the trees of the forest maintain steadily to a certain extent, each kind its own temperature. We mean that they do so as long as they retain their vital condition, but no longer. Thus, during the heat of summer and the cold of winter, the temperature of dead trees accords with that of the atmosphere around them. But not so with trees possessed of life. During warm weather their temperature is considerably *below*, and during cold weather *above*, the temperature of the atmosphere. And of this *vitality* is the cause, independently of any action in the trees of oxygen on either carbon or hydrogen. Nor will the Professor contend that such action exists in them, except perhaps when they are in *positive vegetation*—we mean in actual growth and summer foliage. Assuredly no "combustion" can be even fancied to prevail in them, during the depth of winter, when their roots are surrounded by snow, and their trunks

and branches covered with ice. Yet even under the influence of those chilling agents is their temperature retained."

A slight examination of the subject will show, that there is but little truth in this objection. It will be seen, that the difference in temperature between vegetables and the air is generally slight, and not more than may be explained by other causes than the action of "vitality." A fir tree thirteen inches in diameter, on the shores of the Arctic sea, was found by Mr. King to raise the liquid in Fahrenheit's thermometer to 32°, which in the open air stood at 12°, but the earth around the tree at the depth of a foot was 28°, or only 4° below its temperature. This was in October. In May, the temperature of the tree was lower than that of the air, the earth not having yet been warmed as much as the atmosphere. On the 11th of May, the temperature of a fir tree being 34°, that of the air was 40°; on the 12th, another tree showed 33° while the air was at 43°; on the 13th a fir three inches in diameter was at 61°, the atmosphere 55°; the same day, a birch of two and a half inches in diameter and the air agreed in temperature at 55°; on the 16th, a fir four inches in diameter and the air were at the same point, 48°; and on the same day a shrubby birch indicated 63°, while the temperature of the air was 61°. *Captain Back's Narrative*, p. 426, 1836.

Here, it will be remarked, while the temperature of the air was declining, the tree had the advantage in heat, being 4° warmer than the earth about its roots, and many degrees warmer than the surrounding air. Wood is a bad conductor of caloric, and the heat acquired during the previous warm season was given out slowly. The porous bark is a still worse conductor, and this is often aided by a covering of moss, which generally grows thickest on the north sides of trees. These things account for the fact, that at the beginning of cold weather the tree possessed the higher temperature. But as warmth returned in spring the tree was slower than the atmosphere in attaining the mean heat, because the bark and moss kept out the caloric which, a few months be-

fore, they had helped to keep in, and it was not until the flow of sap had commenced, and the vegetative process was established, that its temperature exceeded that of the atmosphere. And this process involves chemical action. The conversion of starch into sugar and gum is a chemical process. The temperature does not rise till chemical action begins, and the rise therefore, without violence, may be attributed to chemical action. The truth of this will be rendered nearly certain by what is to follow:

"In the Isle of Bourbon," says Dr. Caldwell, "when the temperature of the atmosphere was but 80° of Fahrenheit, Hubert found the temperature of the flowers of *Arum cordifolium* to be 134°. And it is well known to botanists, that the temperature of the blossoms of sundry plants rises to 119° or 120°—the temperature of the atmosphere at the time being that of summer, in temperate climates. In such cases the blossoms generally grow in clusters.

"How," continues he, "will our author reconcile these phenomena with his hypothesis of vital temperature? Does the combustion of carbon or hydrogen or both take place in these flowers?" p. 38.

Certainly; and we wonder, that a teacher of physiology should ask the question. No fact is better established, than that the flowers of vegetables emit carbonic acid, or, in other words, are the seat of a combustion precisely analogous to that which takes place in the systems of animals. Vegetables, as is well known, grow by absorbing carbonic acid and eliminating oxygen, which is done by their green leaves; but in the process of efflorescence, as in that of germination, the opposite goes on, oxygen is imbibed, and carbonic acid is evolved in great quantities. And, as remarked by Carpenter, (*Physiology*, p. 557), we cannot help being struck by the fact, "that these changes occur with excessive activity at the very periods at which the evolution of heat is most remarkable. "The quantity of oxygen consumed by flowers," continues this writer, "is enormous—those of the Arum Italicum having been found to convert forty times their own bulk of that gas

into carbonic acid between the periods of their first appearance and final decay." Is it at all surprising, then, that the temperature of the flowers should be high? Liebig's hypothesis requires that it should; but it is only where these chemical changes are going on, that the high temperature exists. In the leaves and trunks, we have the testimony of most experimenters, that it is but about one degree above that of the surrounding air. It is plain that the author of the "Critique" has pressed this objection through so many pages, from overlooking this obvious fact. Had he considered, as Liebig shows at length, especially in his Vegetable Chemistry, that the function in animals and vegetables, where heat results, is the same—namely the absorption of oxygen, and the extrication of carbonic acid, he would never have published the following paragraph:

"If oxygen can thus, by two modes of action, directly the reverse of each other—union *with* and disunion *from* carbon and hydrogen—produce the same effect, then *may* the hypothesis of Professor Liebig be so far correct. But if it cannot, in its action and influence, thus turn a summerset, then is the hypothesis groundless and untenable. Of this description, therefore, it necessarily is. For as well may it be contended that oxygen, or any other substance, can, at the same time, act and not act, or be and not be, as that it can act to the same effect in two modes, the opposites of one another." p. 40.

We have nothing to say about the experiment with "living and dead wheat." We have seen no report of such an experiment, and until we do, we confess we shall be troubled with doubts, whether a heap of wheat possesses an independent temperature. The fact would be contrary to the observed phenomena throughout both living kingdoms, where, universally, the power of generating heat is associated with a respiratory function. No consumption of oxygen, no independent heat—this seems to be the law in every department of the living world.

But, granting the force of these arguments, what becomes of the "*nervous*" objection? Vegetables have no nerves. If heat is dependent upon nervous action in animals, how is it

developed in vegetables? But plants do, in some circumstances, evolve much heat, and this is found to be attendant upon certain chemical operations. Assume, with Liebig, that these operations are "the source of vital heat," and the difficulty disappears.

We come, at length, to "the most herculean objection" to Liebig's theory—the power of the human body to maintain its temperature in a hot atmosphere.

"As far," says Dr. C., "as the reports of experiments inform us, the temperature of the body of man, in a healthy condition, has never been raised above from 100° to 101° or 102° of Fahrenheit. Yet have men, at sundry times, exposed themselves to an atmosphere whose heat ranged from 200° to near 500°.

"About the year 1780, Sir Joseph Banks, Dr. Fordyce, and Dr. Blagden heated three rooms to different degrees, the highest being 260°. To this latter degree, they exposed themselves, both jointly and severally, for a considerable time. Yet did their personal temperature remain stationary at about 100°. Nor was this all.

"Not only did their bodies steadily retain their own temperature; they reduced very materially that of the rooms in which they stood." p. 44.

"Before the time of the performance of these experiments in London, MM. Duhamel and Tilset, two distinguished and enterprising French physicians, exposed themselves, (or rather two young women), with similar effects, to an atmospheric temperature of 325°. And, not many years ago, it was confidently asserted that M. Chaubert (usually called the '*Fire-king*') exposed himself to a heat of about 500°. And still did the temperature of his body remain at 100°.

"We ask our author, or rather his followers and advocates, to reconcile these facts *with* the Professor's hypothesis of animal heat—or to explain them *by* that hypothesis. And we fearlessly assert that they can do neither.

"We know, as we feel persuaded, what *will* and indeed *must* be the reply of Professor Liebig's disciples, provided they venture to give one. They will assert that the abundant exhalation of perspirable matter from the bodies of the experimenters held their temperature within a degree or two of its customary standard. That in two instances it neutralized or rendered latent the influence of 110° and 111° of caloric, above what it manifested itself, in a third 225° and in a

fourth 400°. But the assertion is extravagant and wild to the pitch of romance. It is virtually, therefore, a departure not only from truth, but from sober probability. As well may the gentlemen assert that a thimble-full of water is sufficient to quench an eruption of Mount Etna.

"But, as respects the reply of our author's advocates, the worst is to come. Messrs. Banks, Blagden, and Fordyce affirm that, when in the heated rooms, their persons, instead of being *exhaling* bodies, were powerfully *condensing* ones. That they drew from the vapor contained in the atmosphere of the room, and rendered latent in themselves, so much of the caloric which produced it, that the vapor was condensed into water, and, in that form, settled on their bodies, and ran down them in streams." p. 45.

The tone of this is confident enough; nevertheless, we are obliged to say, that the argument has no real force, physiologists themselves being judges. That the facts appear to oppose the chemical theory, is not denied, but it is, we must insist, in appearance only, for when examined it turns out that the effect which strikes one as so wonderful depends, first, upon the air's being a bad conductor of caloric, and, secondly, upon the evaporation of the perspirable matter from the body. Experiment proves it.

For example: The hand may be immersed for a few seconds with impunity in tar at 220°, eight degrees hotter than boiling water. *Annals of Philos.*, vol. ix., p. 3. Suppose it were immersed in boiling water, or in mercury at 220°? The heat of metals is scarcely supportable at 120°—water scalds at 150°. Does the difference depend upon the relative facility with which these bodies convey heat to the body, or upon "a hidden and unknown power" in the human system—"a constitutional instinct"—to "render caloric latent?" This constitutional instinct, for aught that we can see, ought to be as good against the hot water and mercury, as against the melted pitch or heated atmosphere. Why reduce to "latency" the heat in one case, and suffer it to pass with such fatal rapidity in the other? It is a strange "instinct."

The atmosphere is ranked among the worst conductors of heat, an interchange among its particles being the process by

which it cools or heats bodies, which process requires time. The bodies of these men were exposed to heat in this medium. The stratum of air in contact with them parted with a portion of its caloric, grew heavier in consequence, and subsided along the floor, making way for a fresh volume of hot air, in its turn to be cooled down and settle towards the bottom. That their temperature rose is evident from the fact, that it was proved to be 100° or 101° after the exposure, and that other animals are found to be heated under a similar exposure; but the increase was not striking, because the evaporation from their surfaces carried away the heat which, if retained, would have soon been insupportable. It is impossible to conceive, that men in health could be exposed to such heat without perspiring most freely, and in every particle of moisture converted into vapor a thousand degrees of heat disappeared. Thus, the caloric slowly imparted by the air, and all excess rendered latent by evaporation, it is not surprising that the experimenters kept cool.

But fancy them in a vapor-bath of 212.° Would their constitutional instinct avail to bring its heat to a state of latency? Delaroche (*Müller*, p. 81), found that if the heated atmosphere be saturated with moisture, which prevents exhalation taking place, the temperature of animals rises 4°, 7°, or 9°, higher than that of the surrounding medium. In other words, their temperature rises as steadily as that of inanimate matter in an atmosphere the humidity of which is sufficient to suppress evaporation, the process by which the redundant heat is carried away, and they soon die in the experiment. In birds, because exhalation is comparatively slight, the heat of the body, according to Delaroche and Berger, rose in a heated air 11° or 12° above the natural standard. These industrious inquirers also found, that an exposure to air of the temperature of 106° to 186°, and especially to hot vapor, speedily raised the heat of their own systems from three to nine degrees. Edwards proved that frogs were killed, in a few minutes, by immersion in water of 104°; and the conclusion is rendered almost certain, that man too would

soon perish if heated some 14° above the ordinary temperature of his body. But, in a hot, dry air for the reasons stated, his temperature is not materially raised during the space for which any one has yet remained in it. And thus, we think, the facts brought forward with such an air of triumph, as the "*herculean*" objections to Liebig's theory, are shown to be destitute of any real force. They are, in truth, a fallacy—a sort of optical illusion—and the wonder is, that in the light which modern science has thrown upon them, they should still be urged as arguments against the chemical hypothesis of vital heat.

Chemists cannot be charged with losing sight of the existence of a vital principle in all living beings, which presides over and directs every change in which chemical agency is concerned. Such a principle is distinctly recognised by Liebig. He sets out with declaring its presence, as in the following passage:

"Viewed as an object of scientific research, animal life exhibits itself in a series of phenomena, the connexion and recurrence of which are determined by the changes which the food and the oxygen absorbed from the atmosphere undergo in the organism *under the influence of the vital force. An. Chem.*, p. 9.

But he goes on to add that,

"All vital *activity* arises from the mutual action of the oxygen of the atmosphere and the elements of the food."

This is all intelligible enough. Activity results from the chemical changes, but a principle is resident in vital beings other than a chemical power—"a peculiar force,' as expressed by Liebig, "because it exhibits manifestations which are found in no other force." This force moulds and shapes the organism, directs muscular motion and the secretory processes, and supplies to the oxygen inspired from the air the carbon and hydrogen to be consumed in a slow combustion. This principle extinct, or impaired by an injury of the nerves, the fuel is no longer furnished, and the vital temperature declines,

We have experienced not a little surprise at meeting with the following passage in the "Critique:"

"Can he, (the chemist) at the temperature of 98° or 100° *out* of the animal body, excite combustion in carbon, and form carbonic acid? No, he cannot." p. 91.

We say it surprises us, because when we had the good fortune to be listening to the eloquent lectures of the author of this pamphlet, twenty years ago, we remember to have heard him relate, with great animation, one of his own achievements in chemistry which proves, in the most unequivocal manner, that he did precisely what he now affirms no chemist can do. Professor Woodhouse had denied the possibility of igniting charcoal by nitric acid; but Dr. Caldwell, with a stronger faith, had the happiness of performing the feat, brilliantly, in presence of the Professor, and to his infinite astonishment and delight. Now, during the twenty winters of repeating this anecdote, is it not a little curious, that the Reviewer of Liebig never once suspected, that this might be "a combustion in carbon," with the formation of "carbonic acid," out of the animal body, and at a temperature by many degrees lower? For *cold* nitric acid on *cold* charcoal forms carbonic acid very copiously, and the heat which attends, and finally amounts to a deflagration, is the consequence, not the cause of the chemical action. We will not consume time by referring, in detail, to the germination of seeds, the fermentation of grain, and the putrefaction of animal and vegetable substances, where, as is well known to the youngest chemist, the combination of oxygen and carbon is going on at a temperature, not unfrequently, much below 98° or 100°, and where the extrication of heat accompanies the union. The wonder is, that they should have escaped the attention of a writer who has undertaken to define so exactly the limits of chemical action.

One objection more, and we are done with this part of the "Critique:" The author mentions certain experiments, illustrative of the power of animals to preserve their temperature in hot water, which deserve a passing notice.

"Take," he says, "a large tub-full of water heated to the temperature of 120° of Fahrenheit. Immerse your feet and legs in it, and the sense of burning produced by it will be painful to you. Allow your limbs to be still for a few minutes, and the burning will cease. Remove them to another place in the water several inches distant, and the burning will be reproduced. Hold them again motionless, and again will you be freed from pain." p. 51.

The cause of this is so palpable, that it must have occurred to the mind of the casual reader. It is manifestly due to the circulation of the blood in the limb. The blood being 100° reduces the temperature of the water; and is itself heated at the same time, but as the quantity heated is small in proportion to the mass of that fluid, the general temperature is not sensibly raised in the interval during which the experiment is continued, and might not be increased at all, the perspiratory process and consequent evaporation carrying off the excess of caloric. But the entire body immersed in hot water is found to be heated, even in the few minutes that a hot bath can be endured. Extreme distress follows immersion in such a bath for a short time, and death takes place before the heat of the animal has risen many degrees. *Edwards. Op. Cit. Becquerel and Brechet*, quoted by *Müller.*

The power of gases to penetrate living animal membranes, the author of the "Critique" regards as so questionable, that he "can hardly withhold from it an expression of his disbelief." Liebig's remarks on that subject, he adds, "compel him to suspect the Professor of indiscreet *credulousness*, and of a strong propensity to deal in the *marvellous.*" All of which is said in the face of multiplied experiments proving, that animals may be killed by immersing their bodies in poisonous gases, while they are permitted to breathe atmospheric air—that gases pass readily through the bronchi, the diaphragm, and the several coats of the stomach and intestines, the animals alive and in health—experiments as conclusive as any in chemistry, physics, or physiology. And while pronouncing a fact, unquestioned except by himself, to

be "wild and extravagant" he hesitates not gravely to put forth the following chimera:

"Admitting it to be true, then, that animals possess a temperature proportioned in height to the extent of their respiration, the fact is to be attributed, not to the superior amount of oxygen, but to that of the *vital principle* received by them in the process." p. 92.

But we have exhausted our limits and must here bring our remarks to a close, incomplete as is our examination of the "Critique." That portion which remains to be noticed appears to us not less objectionable than that which has been passed in review. Truly, the reader of this singular production will have to say, as he turns over its pages,

"———quandoque bonus dormitat Homerus!"

The learned author has slept long upon all the questions to which it relates. Nearly half a century of restless inquiry has swept unheeded by him. Its crowd of discoveries has pressed upon him in vain; his eyes have remained shut to the truths they convey. The theory with which he set out in early professional life continues to be the cherished doctrine of his advanced age, and, like another illustrious theorist in medicine, he seems to have vowed "*never to give it up till he gives up the ghost.*" Y.

Selections from American and Foreign Journals.

Sir Astley Cooper.—The *Medico-Chirurgical Review* thus terminates a review of Mr. Bransby B. Cooper's Memoir of this distinguished man:

"Having been acquainted with Sir A. Cooper for upwards of 35 years before his death—from having been one of his pupils—from having had frequent professional intercourse with him during the last twenty years of his life—from having read all his works, and heard a great deal of him from all quarters, professional and non-professional, we shall endeavour to draw up a succinct summary of the prominent features of his character.

RESUME.

"I. Sir A. was born and imbued with a remarkable vigour of body and activity of mind.

"II. AMBITION was his ruling passion.

"III. This ruling passion, conjoined with physical strength and mental energy, would have placed him at the head of any profession which chance or inclination assigned him. The combination which made him the leader in all juvenile sports, adventures, and dangers, would have made him a Napoleon or Wellington in war—a Pitt or a Peel in the Senate. It raised him to the summit of honors in Surgery.

"IV. Without being avaricious, much less sordid, he was fond of money—partly, perhaps, from the natural love of independence—partly as a means of gratifying his ambition, by the ability of procuring all things necessary for the attainment of his objects.

"V. His industry was never surpassed; and could only have been sustained by a Herculean frame like his, worked on by insatiable thirst of knowledge.

"VI. His temperance, in regard to wine and other stimu-

lating drinks was, perhaps, unparalleled; but he fell into great errors, by the rapid manner in which he bolted his food, which was not half masticated.

"VII. For aught that appears to the contrary, the subject of our biography was as little open to the seductions of VENUS, as to the temptations of BACCHUS. Whether this was owing to constitutional temperament, moral discipline, or religious principles—or all three, we cannot now ascertain. The constant activity of mind and body in the pursuit of knowledge left him little time for sensual indulgences.

"VIII. In early life Mr. Cooper was a Radical—or something *more*—a Revolutionist. In mature age, Sir Astley was a Tory—or something *less*—a Conservative.

"IX. In religion, the association with Cline, Thelwall, and others of that school, in all probability led to FREE-THINKING. In the intense application to medical studies, and during the turmoil of practice, we suspect that Sir Astley did not think much about the matter. His morals, however, were not merely unimpeachable, but of the highest order.

"X. In his intercourse with his professional brethren, he was always kind, considerate, and charitable towards their errors—adopting the Christian maxim

'To hide the faults we see.'

But in the bustle and hurry of miscellaneous prescription at his own house, Sir Astley was not always cautious enough to conceal or pass unnoticed, what he considered as MALA PRAXIS, or blundering treatment in others. In this respect, the late Dr. Baillie was a perfect model for imitation by the consulting physicians and surgeons of the metropolis and great provincial towns. Whatever he may have thought of the methodus medendi adopted by the practitioner who preceded him, he never let fall a syllable or the slightest hint or sign that he disapproved of the procedure previously pursued. Those patients, or rather IMPATIENTS, who appeal from their ordinary to the *consulting practitioner*, are very prone to misconstrue every word and even look of the latter into an indication that their case had been hitherto mistaken, and of course, mistreated. Every man of honor or honesty ought to be especially on his guard against fostering the prejudices of these malcontents, and thus injuring the character of the profession at large. We regret to say that we have known many of those who pride themselves on a high sense of moral rectitude, give way to this vile system of detraction,

by which the noble science of medicine is wounded in its most vital parts, and degraded in its character. This detraction is even carried into the public prints, and too often becomes the subject of legal proceedings!

"XI. We need hardly observe that the subject of these memoirs was a prime favorite with the public, as well as with the faculty:—we may safely add, that he was not less so with himself. Few men had a better opinion of themselves, personal or professional, than Sir Astley Cooper. Durine a long acquaintance we never once saw him enter a drawing-room, and pass a mirror, without casting a furtive glance of inquiry, not unfrequently mixed with a smile of approbation at a fine figure that seemed to return the compliment *through* the pellucid glass. So in a professional point of point of view, Sir A. entertained so profound a respect for his own opinion, that he generally preferred it to the opinion of others, and therefore, in nine consultations out of ten, his word was law.

"XII. TRUTH, which is said to *lie* in a well, (though we could never see any lucid reason for the supposition), was held in such veneration by Sir Astley, that he never placed confidence in any man whom he found to deviate from that cardinal virtue. We have known him *embellish* an anecdote, a bon-mot, or a humorous incident; but we believe that he adhered to the rigid and naked truth on all other points.

"XIII. His devotion to science, and his indefatigable pursuit of knowledge, rendered it, perhaps, impossible that Sir Astley's mind could become susceptible of keen attachment or friendship to an individual. Intense exercise of the intellectual powers is little favorable to deep culture or centralization of the affections. Sir A. had numerous friends and still more numerous admirers, but it is doubtful whether he entertained any very ardent friendship himself for either one or the other.

"XIV. In respect to LOVE, his marriage in twelve months after the death of his wife, and when he had passed his "GRAND CLIMACTERIC," offers a rather equivocal proof of his wisdom, whatever else it may indicate. True, he had precedents innumerable for this procedure; but precedents in love, law, and physic—especially in the *first* and *third*, are not always followed with perfect safety. It may be urged, on the other hand, that Sir Astley had a very *fair* excuse for matrimony, considering the personal attractions of Miss Jones—and that long courtships, at all times, but particularly after sixty years of age, are somewhat hazardous!

"XV. Sir Astley Cooper was a bold as well as dexterous

operator. His ligatures on the carotids and aorta are sufficient illustrations. No man had a steadier hand, and a keener eye, or sharper knife—or made a cleaner cut than Sir A. He did not finesse, or fritter away his time in dividing fibre after fibre, even in somewhat ticklish dissections. He generally "went the whole hog"—to the root of the evil, with a few strokes of the scalpel, while his cheerful and animated countenance supported the confidence of the bleeding victim!*

"XVI. Although more than half of Sir Astley's morning practice at home, was what is called purely *medical*, yet he did not keep pace on all points with the modern improvements in pathology, semeiology, or therapeutics. Auscultation was introduced into this country in the year 1818, when Sir Astley was about the age of 50, and, considering his zeal and energy, it is wonderful that he did not cultivate this, the most scientific branch of our art. The stethoscope apart, however, his diagnosis of organic diseases of internal as well as external parts, was remarkably correct, and did great credit to his acumen and judgment.

"XVII. Taking him all in all, it is very unlikely that the professional world will ever see among them such a master mind and master hand again, as Sir Astley Cooper. Not that his genius and talents will not find equals in every successive generation, but that the general elevation of medical education will prevent any individual in future from soaring high over the heads of his cotemporaries. Among a race of *pigmies*, there may be occasionally a full grown HOMO; but among men how rarely do we see a giant?

"XVIII. It is an ungrateful task to find fault with the last act of a great man. But we are constrained to do so in the present case. We acknowledge, with a noble Lord, that 'every man has a *right*, (a legal one), to do as he likes with his own.' But LAW is not always EQUITY; and the rich man

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* "We were under the hands of Sir A. Cooper and Mr. Guthrie, in some trying operations. It is not for us to say which we would prefer, *now* that the hand of one is cold and powerless. But we may state that these eminent masters of their art *were*

'Arcades ambo
Et *secare* pares, et *re*-secare parati.'

"Apropos, as to the sensations experienced during a cutting operation. Not one in 500 surgeons know what they are—luckily for themselves! We had formed a very erroneous opinion of them before we became acquainted with the scalpels of the above-mentioned surgeons. They are not pain, but a *burning* sensation, as though a fine stream of boiling lead were jetting on the parts."—*Rev.*

who bequeaths his wealth more in accordance with the *former* than the LATTER, is not entitled to post-obit praise on this point. The last and testamentary act of Sir Astley Cooper proves the truth of our assertion at the beginning:—that *ambition* was his *ruling passion!* He has left the hard-earned masses of forty years' toil and privation to support a title and incorporate his name with the aristocracy, which, in early life, he despised, while he has left a paltry thousand to his eleve—his nephew—and the most honorable, amiable, and talented of all his relations!!

CONCLUSION.—"We cannot close this article without saying a few words as to the biography and the biographer. We think Mr. B. Cooper has been rather severely handled by some of his critics. They aver that the biography is needleesly minute, and badly arranged. The work is certainly not conspicuous for the LUCIDUS ORDO; nor is it remarkable for its concentrativeness. But it is the very nature of a biographer to be *minute*. We hunt after the little sayings and doings of a great man, with much more curiosity than after the main and more public acts of his life.

'Nihil est aliud magnum quam multa minuta.'

"Nothing was ever more minute, and gossipy than Boswell's life of Johnson, and yet to that very quality was half its popularity owing. Some critics say that the work is badly written. We do not think so;—and we have read every page of it. It is better written than some of the critiques on it. We do not deny that it is diffuse, and not well arranged; but we are of opinion that the heterogeneous materials from which the narrative of the biography was constructed, would have puzzled the ablest and the most practised writer.

"The introduction of the RESURRECTION-SCENES is another charge brought against the biographer by the squeamish sentimentalists of the day. But what was of vast importance to Sir Astley, and indeed to the whole of the profession at that time, should not be passed unnoticed now that such scenes are swept away by legal enactments.

"We are of opinion, however, that in a future edition (and many will be called for), Mr. Cooper may usefully compress the matter, making up for this compression, by an extension of those excellent moral and professional remarks and counsels which are scattered through the volumes as they stand."

Sale of Secret Remedies Abroad.—An amusing scene was enacted in the Royal Court of Paris lately, during the trial before it of a Mr. Warton, the proprietor and vender of the *Ervalenta de l'Afrique* and the *Melasse de Cochinchina*, a compound respecting which, some proceedings, in an inferior court, we noticed in a former number of THE LANCET. It may be recollected that on the previous occasion the ervalenta turned out to be nothing more than ground lentils, and the Cochin-chinese treacle to be ordinary molasses. The decision however, on that occasion not having been completely according to the wish of the attorney-general, he moved the case into a superior court: it will be seen that he went farther and fared worse. The following conversation before the latter court is detailed in the "Gazette de Tribunaux:"—

Question. You have publicly sold some alimentary substances?—*Answer.* I have sold Ervalenta and Melasse of Cochinchina.

Q. How have you procured the knowledge of their virtues?—*A.* It is to myself that the world owes the discovery of the quality of the first. I know nothing more efficacious against—constipation!

Q. But there is the melasse also.—*A.* Aye,—I should think so, and an excellent thing it is,—*pardieu!*

Q. Why have you not announced this remedy under its real and ordinary name?—*A.* I did so at first, but it didn't take. I then substituted the scientific for the ordinary name of it, and I have now sold all my stock.

Q. But you have shortened the scientific name?—*A.* I have, indeed, shortened it a little in *Frenchifying* it; but then that has nothing to do with the properties of the remedy.

Q. If the public knew that that which you sell is nothing but lentil-flour, probably no one would buy of you?—*A.* Well, that's possible!

Q. How do you sell each packet?—*A.* At three francs the kilogramme. The grocers sell it much cheaper; but I have doubled the price to avoid the appearance of any collusion with them.

Q. And you say that it will cure diseases?—*A.* As an article of food it is excellent. It preserves you from the *fatiguing inconvenience* of constipation. (The speaker warmed as he proceeded in detailing the virtues of his specific.) Do not believe, gentlemen, that I stand here as a fanatic—an enthusiast. No, no, I am no charlatan, and if I tell you that the Ervalenta is a specific against constipation, it is because

I have proved the fact on my own person. (General laughter.)

Q. What have you to say, then, of your Cochinchinese treacle?—*A.* Cochinchinese is, perhaps, not exactly the most proper word; for the article comes principally from Jamaica and Porto Rico—some little distance, indeed, from Cochinchina. I have given it that name to prevent people going to the grocers, who sell only beet root treacle—the savages! Do you know the effect of grocers' treacle? It does not cure constipation—it increases it.

Q. But you make the public pay five times as dear for your melasses as they do elsewhere?—*A.* Never think it is a desire to get money that makes me sell my article so dearly. Druggists commonly get 6d for what grocers pocket only 3d. And, besides, they too often sell the vile beet-root treacle for that of the cane, that they may afterwards have to sell purgatives, &c.

Much against the wish of the attorney-general, the Royal Court acquitted Warton, who probably owed his success to his unabashed and mirth-making mode of pleading his own cause.—*Lond. Lancet*, Sept., 1843.

Worari Poison and its Effects.—This virulent substance, manufactured for purposes of offence and defence by the Indians of the interior of Guiana, &c., is now ascertained with tolerable correctness to be essentially the juice of the bark of the worari vine, a gourd bearing plant, the fruit of which is of the size of a large orange. Some other plants or material have been said to be occasionally used in its preparation, as strong Indian pepper, two species of snakes, &c.; but if such be really the case, it is probably with the view, chiefly, of throwing a mystery over the process.

The worari vine grows in a sandy soil. The mode of preparing the poison is as follows:—The inner bark or rind of the root (for it is the root only that is used), is scraped off into some vessel. The worary bally-root undergoes the same process; and is mixed with the worari as is the vine of the courampoey. To these, mixed together and well boiled down with some water, the Indians add some peppers, and further boil the whole mass to a thick syrup.

Dr. Hancock has remarked that if such a thing does exist in nature as a direct sedative, in the strictest sense of the

term, he should imagine it to be this extraordinary vegetable extract. Its operation on the animal frame is most mysterious. It extinguishes the vital spark without a pang or a struggle, if prepared without any other substance being added, for the most efficient poison is prepared from the worari vine alone. The sensation and effect it produces are extremely analogous to those which arise from excessive bleeding—the animal under its influence sinking from existence in the most placid swoon.

Sir B. Brodie, in two papers read before the Royal Society in 1811 and 1812, has described the results of several experiments performed with this poison, one of which was the following:—

"Some woorara was inserted into a wound in a young cat. She became affected by it in a few minutes, and lay in a drowsy and half-sensible state, in which she continued at the end of an hour and fifteen minutes, when the application of the poison was repeated. In four minutes after the second application, respiration entirely ceased and the animal appeared to be dead, but the heart was still felt acting about one hundred and forty times in a minute. She was placed in a temperature of 85° Fahr., and the lungs were artificially inflated about forty times in a minute. The heart continued acting regularly. When the artificial respiration had been kept up for forty minutes, the pupils of the eyes were observed to contract and dilate on the increase or diminution of light, saliva had flowed from the mouth, and a small quantity of tears was collected between the eye and the eyelids, but the animal continued perfectly motionless, and insensible. At the end of an hour and forty minutes from the same period there were slight involuntary contractions of the muscles, and every now and then there was an effort to breathe. The involuntary motions continued, and the efforts to breathe became more frequent. At the end of another hour the animal, for the first time, gave some signs of sensibility when roused, and made spontaneous efforts to breathe twenty-two times in a minute. The artificial respiration was discontinued. She lay, as if in a state of profound sleep, for forty minutes, when she suddenly awoke and walked away. On the following day she appeared slightly indisposed; but she gradually recovered, and is at this time still alive and in health."

Sir B. Brodie found that the effect of the poison was the more speedy and certain if there were some, but not much hæmorrhage. It appears that the poison may be taken into

the stomach without injury, a considerable quantity having been administered to animals by the mouth without producing any sensible effect.—*Lond. Lancet*, Sept. 1843, from *Pharm. Journ.*, August.

Dislocation of the External Semilunar Cartilage. By Caleb Taylor.—On the morning of the 17th instant I was summoned to Thomas Mills, ætat. 30, a well-proportioned man, resident in this town. He stated that whilst in the act of "cutting his corns," with his foot and leg somewhat twisted inwards, he felt as though something had given way in the knee, and immediately found that he had no longer the power of extending the limb, every attempt at so doing producing severe pain in the joint. He told me that the same accident had occurred to him twice before; the first time in the country, when two surgeons were with him for several hours before the limb was made to resume its normal condition. It again occurred in London, where he applied at St. Thomas's Hospital, and he states that the late Mr. Tyrrell and several others were a long time trying to "put it right," but failed; the plan adopted was by making very powerful pressure over the patella, which caused him severe suffering, and produced much swelling. He was directed to go home, leech freely, apply cold lotions, and keep in bed. On the third day, whilst making a sudden movement in bed, he suddenly recovered the power of straightening the limb or placing it in any position without pain. He felt that "all was right," and resumed his occupation.

I found the leg flexed, and any attempt at straightening produced pain, referred to the situation of the external semilunar cartilage. I fancied (it might be fancy) that I could see a slight elevation of the supra-incumbent tissues, and supposed it to be a partial dislocation of that cartilage. I immediately made extension at the ankle, at the same time adducted the tibia, making the knee of the opposite side a fulcrum, the tendency of which would be to separate the external part of the articulating surfaces of the tibia and femur; his wife, at the same time, was directed to make firm pressure over the cartilage. After keeping up extension for about ten minutes, the parts resumed their normal condition, and, much to his delight, the patient found he could walk with ease, and, in spite of remonstrance, immediately returned to

his occupation. The only after treatment was that of directing him to wear a bandage over the knee.—*Lond. Lancet*, Sept., 1843.

Anatomy and Physiology of the Spinal Accessory Nerve.—A Sig. Morganti, of ihe University of Pavia, publishes the following, as the results of various experiments which he has performed on different animals with the view of discovering the certain origins, and accordingly the functions, of the spinal accessory nerve of Willis. His conclusions are:—

1. That the spinal accessory is a motor nerve.
2. By its external branch it conveys the power of motion to the muscle to which it is distributed.
3. By its internal branch it gives motion to the muscles of the larynx, and consequently *it is the nerve which serves for the production of voice.*
4. Its external branch is composed of fibrils, which proceed from the lowest origins of the nerve in the spinal cord.
5. Its internal branch is formed of the higher fibrillæ—those which originate next beneath the pneumogastric nerve—and contributes those fibrils to the latter nerve which form the recurrent nerve and *the motor fibres of the pneumogastric throughout its course.*—*Ibid*, from *Annali Universali di Medicina*, July, and Sept., 1843.

One Advantage of Marriage.—Dr. Casper, of Berlin, has estimated the mortality of unmarried male individuals, between the ages of 30 and 45 years, to be 27 per cent., while among married men of the same period of life it is only 18 per cent. For 41 unmarried men, 78 married men attain the age of 40 years: and the disparity is more striking as age advances; for at 60 years of age there are only 22 bachelors to 48 Benedicts; at 70, 11 to 27; and at 80, 3 to 9.—*Ibid*, from *Gazette des Hôpitaux.*

Diagnosis between Epididymitis and Orchitis.—In the former disease the epidiymis forms a distinct crescentic tumour behind the testis, and is hard, while the testis preserves its

proper size and elasticity, and is free from adhesions. In orchitis, on the contrary, the testis is increased in size, hardened, and adherent to the skin of the scrotum, which has lost its puckered appearance.—*Ricord.*

THE WESTERN JOURNAL.

Vol. VIII.—No. VI.

LOUISVILLE, DECEMBER 1, 1843.

THE WESTERN JOURNAL.

This number completes our eighth volume, and we have determined to recommend to our publishers, to issue the first number of the next as the beginning of a new or second octade. This will afford a favorable opportunity for gentlemen wishing to subscribe, as they may commence with the series.

To the professional brethren who have made to us contributions of their experience, we tender thanks and acknowledgments. To those who have not, we take the liberty of saying that they *ought* to write. The profession has claims on all its members, which should be met. Physicians, as a body, compose a school of reciprocal instruction. They can look only to themselves and to each other for the means of improvement. Giving and receiving should then be mutual, although they may not be equal. Equality, indeed, is not either attainable or necessary in a system of interchangeable teaching. If we look to the East—to our elder brethren of the seaboard—and to the physicians and surgeons of Europe, for contributions to our magazines of knowledge, it is due to our own reputation, to common justice, and to the interests of humanity, that we should, as far as pos-

sible, maintain the balance of intellectual trade, by returning as much as may be in our power. The amount which might be given back, is, we are fully persuaded, far greater than is generally supposed; for the true character of the diseases of the various climates, and localities, and classes of people in the West and South, has not yet been made known. Now, every practitioner of medicine may, by recording and publishing, contribute something towards this good work.

Although we have spoken of the completion, by this number, of our *eighth* volume, our periodical has some claims to an earlier origin and much longer life. It is, in fact, a continuation of the *Western Journal*, begun in 1827, by one of the present Editors, and which, with some interruptions, was continued at Cincinnati, till 1839, when the subscribers were transferred to the publishers in Louisville. Thus it was the pioneer periodical of the West, or if not the very first, the only one that survived a single year. Perhaps it is not wholly unreasonable to claim for it a portion of respect on this account. If it has never been brilliant in style and speculation, nor a very *cornu copiæ* of experimental results, it has contained many communications that would have done honor to any periodical; with a still greater number which have contained useful observations on the diseases of the West; and has diffused such an amount of foreign intelligence, as to secure a *domestic* patronage, which has sustained it for sixteen years, during which nearly every eastern journal in existence at the time it was started has expired. We have underscored the word domestic, to indicate the locality of our subscribers. Almost without an exception they reside west of the mountains, between the Lakes and the Gulf of Mexico. Of the hundred and twenty professors, in the twenty schools, east of the mountains, but one is a subscriber; and out of those institutions we have but fourteen in that entire region. Is this the comity and consideration, which elder should extend to younger brethren, struggling under the disadvantages inseparable from a new community scattered through the wilderness? We wot not. Thus our journal does not divide the patronage of the East with its own; but the journals of that portion of the Union, compete for patronage with ours in the West. So far from complaining of this, it gratifies us much, as every exhibition of professional inquisitiveness always does. We would rejoice to see the time, when every medical man would sub-

scribe for at least two journals. No one stands still in science. If not advancing, he is backsliding. But he cannot advance unless he combine the discoveries and inventions of his cotemporaries, with his own experience. As individuals, then, who cherish an abiding interest in the improvement of Western medicine, we would say to every medical gentleman—subscribe for at least one journal; make your selection, and if you should be disappointed in its character, drop it; but still subscribe—try another, and do not allow yourself to remain ignorant of the improvements which every day brings forth. It is the practice of many physicians, to wait till these improvements make their way into systematic works; but several objections lie against this custom. First, the delay; second, the condensed instead of the expanded statements of the original authors; third, the forced appropriation made by systematists and theorists, of new facts for the purpose of supporting their favorite hypotheses. The physician who relies on systems of surgery and physic for his information and intellectual discipline, acts unwisely—does his own mind injustice. To give it (in back-wood's phraseology), a fair chance, he should, as far as possible, learn the discoveries in the profession from their respective authors. In other words, the original extended account not only imparts the best information, but the study of it is the best exercise of the mind. He who relies upon compilations, may be a ready, but can never be a profound man. He adopts the results of inquiry without knowing the data from which they have been derived; has not, of course, travelled through the processes of logic by which they were obtained; and is unable to say, whether the conclusions he receives are true or false. Such should not be the information or mental discipline of him whose professional life, properly carried out, is one of unrelaxed mental exertion. But not intending to read a homily, we shall say no more on this topic.

We are happy to announce, that our publishers have made arrangements to print the next, and all subsequent numbers, on new type; and that each will be extended to ninety-six pages, making one hundred and forty-four pages more in the year, than heretofore, while the price will remain the same. This will enable us to give a more copious account of foreign discoveries and improvements than heretofore, and will we trust prove acceptable to all our subscribers.

Eds.

"THOU ATOMY THOU!"

A late number of the *Reperterio Medico-Habanero*, gives a brief account of an *anatomical man*, named Claudius Ambrose Seurat, five feet three inches in height, and weighing only *forty-three pounds!* He is a native of Troyes, France, and was born in 1798, of healthy parents. The emaciation began at the age of four years, and continued until the twenty-fourth year; it cannot be attributed to sickness, as during this period his health was good. The chest is so much depressed that the sternum is only three inches from the vertebral column. The heart and lungs are situated lower than natural. Respiration is easy; the pulse beats about fifty to the minute, and is feeble. The arms are two inches and a half in circumference, the legs one in thickness. He consumes, daily, about twelve ounces of food, consisting of fish, light meats, &c.; when eating he supports himself with the elbows on the table or on his knees, his extreme debility not permitting him to raise food to the mouth in any other manner. He requires assistance in walking, and lifts the feet very high through fear of falling or stumbling. The intellectual powers are not enfeebled like the physical. He can read and write, and his responses to questions propounded to him exhibit a good discernment, and a correct judgement.

Accompanying the description, are three full length drawings on stone, giving a front, side, and back view of the individual. These, although we are told his aspect is not disagreeable, certainly represent him as a doleful looking object—some such being as must have been Shakspeare's beadle, whom *Doll Tear-sheet* calls "a tripe-visaged rascal"—a "good-man death! good-man bones!"

The only case approaching this, and of which we have any knowledge, is that of Calvin Edson, who weighed *fifty-six* pounds—the height we do not remember. C.

GALT'S PRACTICAL MEDICINE.

This volume consists of extracts from the note-book of Dr. Alexander D. Galt, selected and edited by his son, Dr. John M. Galt. Galt the elder, as we are told in the preface, after studying several years in the office of his father, spent four years in London, under Sir Astley Cooper; he returned to Virginia, and practiced his profession

for forty years at Williamsburg, acquiring a most enviable reputation as a skilful and scientific physician. The character of the volume is indicated in the following quotation from the preface:

"In the selection of the cases individually, we were guided by their completeness; for some were nothing more than short notes. As to the diseases, we chose those of which there was the largest number of cases; for besides getting, thus, a more minute description, the most common diseases have been selected by this mode of choice. Any case not belonging to one of these diseases, if it possessed any thing uncommon, we also copied; original remarks, too, we have included; so that the work consists of these three classes of subjects."

The papers selected comprise cases of intermittent and remittent fever; inflammation of the pleura, lungs, and bronchia; colic, dysentery, rheumatism; with many others grouped under the head of miscellaneous. They are, according to the editor, a faithful picture of the diseases occurring in that section of country, and which have never been particularly described. In this view, the volume is valuable. Moreover, it shows on the part of the elder Galt an industry worthy of imitation; and as a tribute to the memory of a parent, and a good and useful man, it exhibits in the editor a feeling that will meet every where with warm response. C.

PEREIRA'S MATERIA MEDICA.

A review of this very valuable work will appear in our next number.

MEDICAL INSTITUTE.

The class at the Medical Institute this winter, is the largest out one that has yet assembled within its walls.

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